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## MACH 14 FLOW RESTRICTOR THERMAL STRESS ANALYSIS

BY E. J. BECKER

STRATEGIC SYSTEMS DEPARTMENT

1 AUGUST 1984

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FOREWORD

This report documents a thermal stress analysis conducted at the Naval Surface Weapons Center/White Oak (NSWC/WO) between January and April of 1984. The objective of the study was to determine the effects of heating and mechanical pressure loading on the flow restrictor plate used in the Mach 14 leg of NSWC/WO Hypervelocity Wind Tunnel (Tunnel #9). Of concern were the compressive and tensile yielding that might be occurring during tunnel runs for different supply conditions.

Included in this report are the procedures for model generation using PATRAN-G, model translation into ABAQUS format, transient heat transfer analysis and thermal stress analysis input decks, results translation from ABAQUS to PATRAN-G, and any problems encountered while performing some of the above analyses. It also outlines the method used to determine the heat transfer film coefficients needed for ABAQUS. The results of these analyses were then reviewed and appropriate recommendations were made for future analyses.

This work was performed in support of the Wind Tunnel Safety Committee for the Aerodynamics Facilities Branch (K23).

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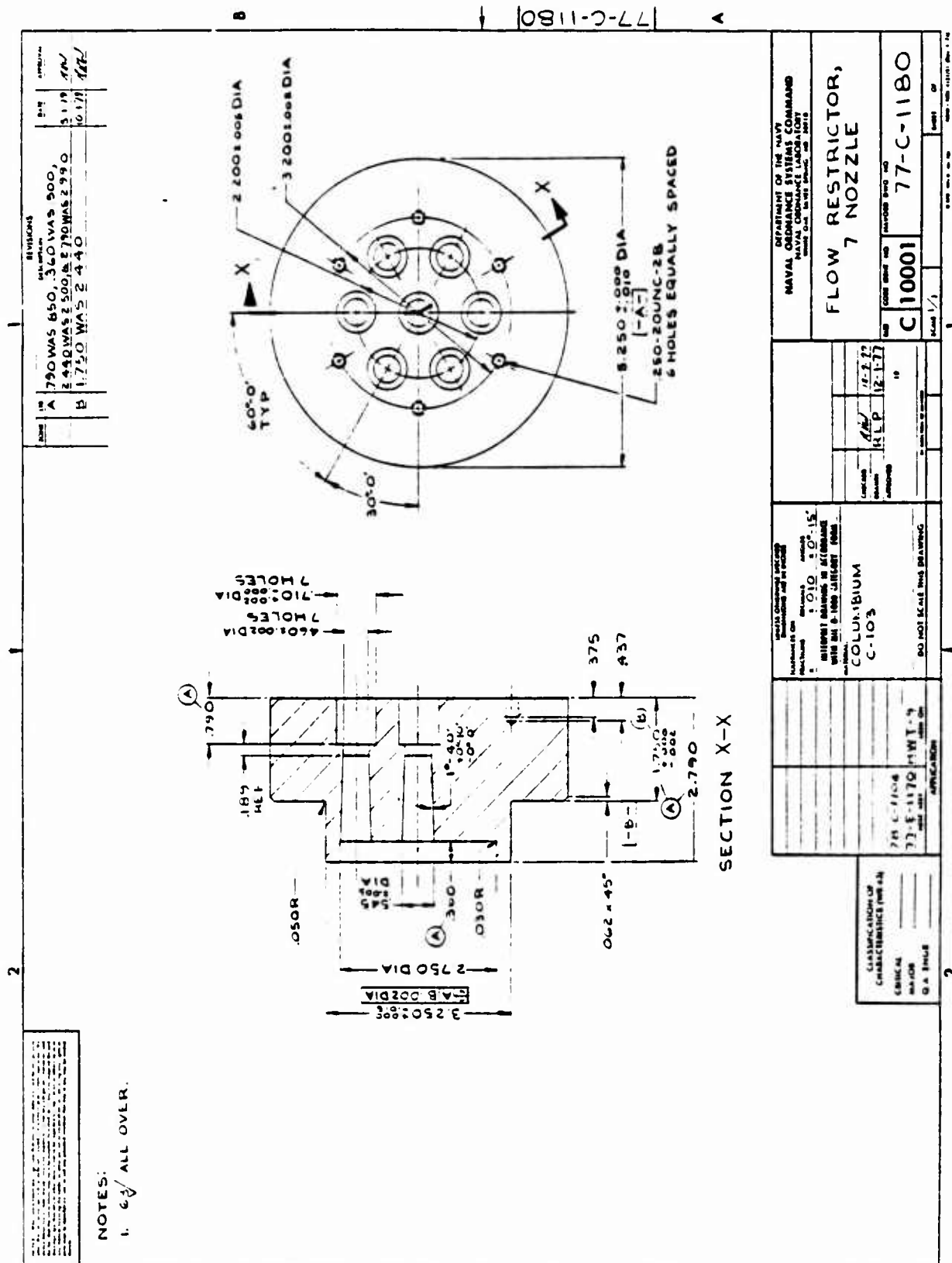
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## INTRODUCTION

A blowdown wind tunnel subjects many components to compression and expansion waves due to the sudden expansion of high pressure gas. Sometimes, as an expansion wave moves against the flow of air in the tunnel, components in the flow path can be damaged by the oscillating pressure load, coupled with high gas temperatures. In the Mach 14 leg of the Naval Surface Weapons Center/White Oak Hypervelocity Wind Tunnel (NSWC/WO Tunnel #9), a flow restrictor plate was introduced to alleviate this problem. It lessened the effect of the high pressure expansion wave on the heater element by reducing the magnitude of the expansion wave. This reduced the loading effects on the heater element. However, this causes a pressure drop across the flow restrictor which resulted in a pressure load on the plate. Under normal conditions, this pressure drop is about 2000 psi.

What has become of interest is the pressure drop across the plate that can be run at a certain temperature. Different pressure drops will give different tunnel conditions, and thus enhance the capabilities of the wind tunnel. Unfortunately, as the pressure drop goes up, so does the load across the flow restrictor. This causes a problem as undesirable effects, such as material yielding, can occur on the flow restrictor. In Tunnel #9, the flow restrictor plate is made out of Columbium C-103 and is 5.25 inches in diameter with a 2.79 inch thickness (see Figure 1). Because of the flow restrictors location in the wind tunnel, it encounters high temperatures due to the flow of the supply gas passing through it. The thermal stresses from these high temperatures, coupled with the pressure loading, can result in yielding that leads to fatigue failure at a later time. Thus the question arises, how large a pressure drop can be safely run at a given temperature.

The analysis conducted addresses this problem. This was accomplished by first making a transient heat transfer analysis. After this was completed, a particular temperature gradient field was selected and a thermal stress analysis made which included pressure loading. The procedure used to make the necessary computer runs are included in this report. Also included are some of the problems encountered while making the computer runs. Lastly, the results of the analysis are reviewed with conclusions and recommendations made for future studies. This will help define what conditions could be run in future wind tunnel tests.



**FIGURE 1. MECHANICAL DRAWING OF MACH 14 FLOW RESTRICTOR PLATE**

## MODEL GENERATION

The finite element model that was used in this analysis was created using PATRAN-G. PATRAN-G is an interactive solids modeling graphics program and is supplied by PDA Engineering of Santa Ana, CA. The model dimensions were taken from a mechanical drawing of the Mach 14 flow restrictor plate (see Figure 1). Due to the symmetry of the plate, a 30 degree wedge was used for the final finite element model. The section that was used is shown in Figure 2. Figure 3 shows the finite element model used in this analysis.

The procedure for generating the finite element model is given in Appendix A. This appendix includes the listing of the commands input to PATRAN-G to develop the geometry of the model and then the finite element model. These are the session files generated while using PATRAN-G.

It was decided to use 20 node bricks for the finite element model. There were 2 main reasons for this choice. The first was that less elements would be needed to make up the model. This was an important consideration as the number of elements affects the run time for a computer analysis. Even with the increased number of integration points for a 20 node brick (27 as compared to 8 for the 8 node brick), less time was used to obtain a reasonably accurate solution. With 8 node bricks, 8 times as many elements would have been needed for the same number of nodes. This, in turn, would have increased the wavefront number in ABAQUS and dramatically increased the run time. The second reason was that 3 node sides allowed for quadratic equations to define the side of an element. This meant that a curved surface, such as a half-circle, could be exactly defined. This was desired as the model became more realistic than if 8 node bricks had been used, which have straight sides.

After the model had been completed, a neutral file was created using PATRAN-G. This was necessary in order to use the translators available at this time. Also, it is important to have a property identification (PID) number associated with each element. This can be done at the same time that elements are generated for the model using the PFEG command. If there is no PID number, the translator will give a warning message to the terminal screen for each element without a PID number. Refer to Appendix A as to where this command occurs in the finite element generation process.

## MODEL TRANSLATION FROM PATRAN-G TO ABAQUS

Once the finite element model was completed and a neutral file existed, a process was gone through to obtain the node and element data for an ABAQUS input deck. This was initiated by using 1 of 2 commands. These are PATNAS and PATCOS, and are part of the translator capability supplied by PDA Engineering with PATRAN-G. Both will result in the creation of a NASTRAN bulk data file. It was found that only PATCOS is capable of translating 20 node brick elements.

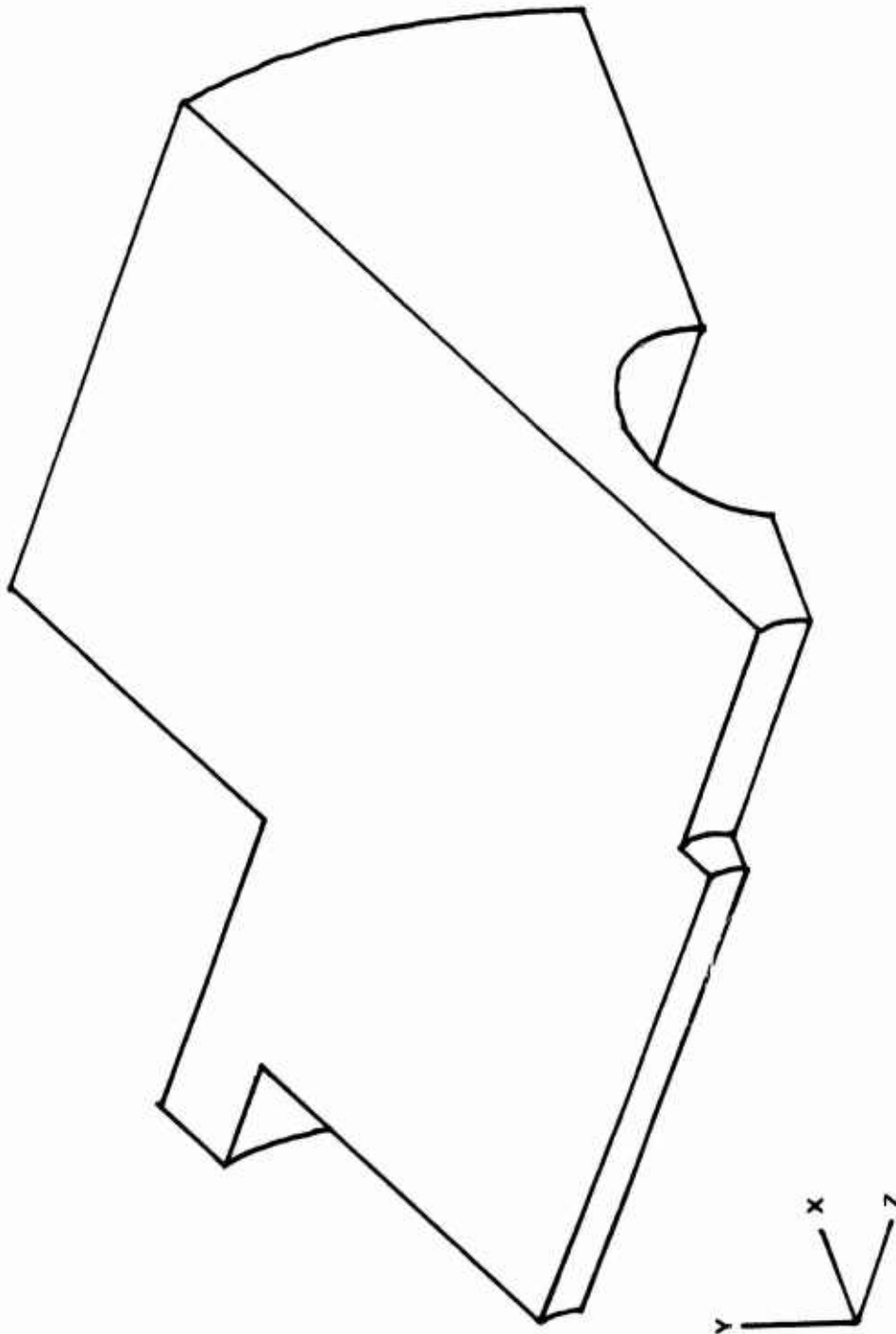


FIGURE 2. SECTION OF FLOW RESTRICTOR USED FOR FINITE ELEMENT MODEL

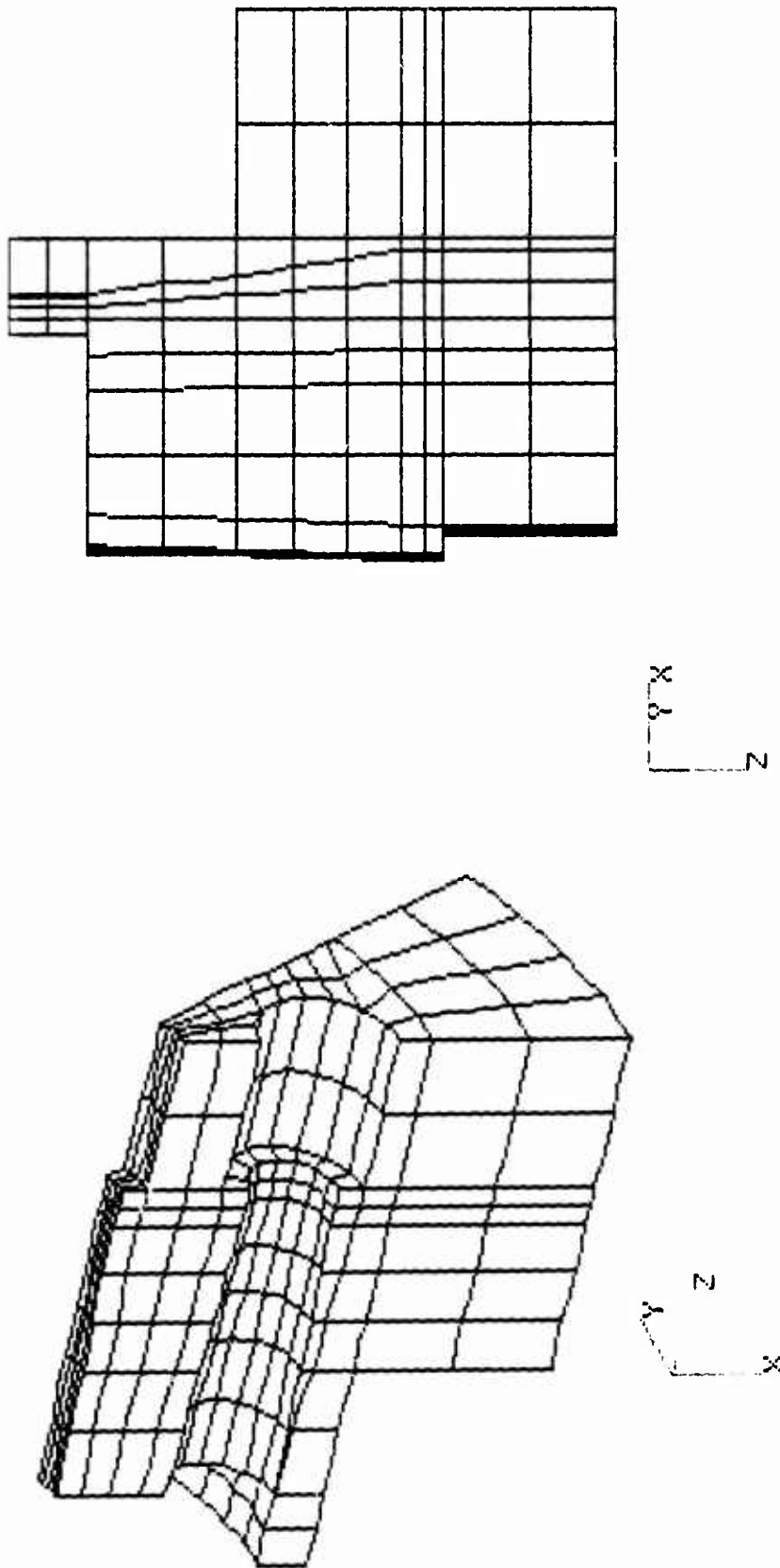


FIGURE 3. FINITE ELEMENT MODEL OF MACH 14 FLOW RESTRICTOR PLATE

The translation process is started by typing the command

\$ PATCOS

and answering the menu according to what is desired at the time. The underlined letters represent the users response. The other part of a command line is the prompt issued by PATCOS, or the system as is the case with the \$. After PATCOS has been initiated, it responds with a menu selection that the user must select from for the translation to start. For this analysis, a menu response of

Selection > 1

was first selected, which requests translation to be done. The response to the questions following are dependent on what has been done while using PATRAN-G.

PATRAN-G Neutral File name?  
(Just <ret> if latest "PATRAN.OUT")  
> FRABAQ.OUT

FLOW RESTRICTOR ANALYSIS

16-JAN-84

10:02:45

1.5

Is this the correct file? (Y/N)

> Y

Enter title for the bulk data file.  
Just <ret> to use the neutral file title.  
> <ret>

TRANSLATION INITIATED

1952 GRID record(s) written on "NASTRAN.BDF".

---

328 CXXXX record(s) written on "NASTRAN.BDF".

---

----- Translation done -----



2280 logical records (2936 card images) have been written on file "NASTRAN.BDF".

Hit <ret> to continue. > <ret>

At this point, the NASTRAN bulk data file has been created and is called NASTRAN.BDF. This is the default name given by PATCOS. The file FRABAQ.OUT is the neutral file output from PATRAN-G. Its original name, PATRAN.OUT, was changed so as not to confuse it with other existing neutral files. After the response to continue, the PATCOS menu again presents itself to the user. A response of

Selection > 6

was chosen since the translation was completed at this time. PATCOS responds to this with the message

PATCOS execution completed

and the user will be returned to the regular system \$ prompt. This ends the PATCOS translation process.

As a result of this translation, PATCOS has created a couple of new files. These were the NASTRAN bulk data file NASTRAN.BDF and PATCOS.MSG. The second of these files, PATCOS.MSG, is just an informational file of what has been done by PATCOS. A listing of PATCOS.MSG is included in Appendix B.

It was now possible to create an ABAQUS input deck by using the translator COSABA. A procedure file, TRANSL1.COM, was used for setting up and submitting COSABA via another procedure file TRANSL.COM. Copies of COSABA, TRANSL1.COM, and TRANSL.COM can be found in Appendix B.

In order to use TRANSL1.COM, an INPUT.DAT file must exist with at least two lines of information. These two lines

4  
C3D20

are the element identifier number (4) and the element type (C3D20). These two lines are needed for every different type of element used in the NASTRAN.BDF file with the first element type used first, the second element type used second, and so on.

With this file and NASTRAN.BDF available, it was possible to use TRANSL1.COM. This was done by typing the command

\$ @TRANSL1

and responding to the questions asked by the procedure file.

Input data file (or RETURN for INPUT.DAT):<ret>  
 NASTRAN input file name (or RETURN for NASTRAN.BDF):<ret>  
 ABAQUS output file identifier (or RETURN for ABAQUS.DAT):FRABAQ.DAT

TRANSL.COM was automatically submitted after all the questions were answered. This resulted in the creation of an ABAQUS input file which contained only the node and element data for the flow restrictor finite element model. The ABAQUS input file, FRABAQ.DAT, had to be edited and the remaining information input by the user. This included the rest of the model definition (such as node and element sets), material definition, and history definition. Each of these will be defined in the following sections of this report.

A flow chart of this forward translation process is given in Figure 4. With this figure and the files in Appendix B, the entire process can be understood. Special attention is directed to the informational notes contained in COSABA. These were of help in generating the proper INPUT.DAT file format.

#### ABAQUS CONSIDERATIONS

In completing the ABAQUS input file, a number of considerations must be made. These included what options will be used, model connectivity, and desired accuracy for the results. Each of these areas impact the analysis time, but in different ways. Some take longer computer time, while others require user supplied computer coding. In any event, care must be taken when assembling the remainder of the FRABAQ.DAT file.

The model definition of the input file is usually taken care of in PATRAN-G. Unfortunately, PATRAN-G does not always generate elements and nodes in the optimum way. Due to the way ABAQUS works, this can become critical in relation to the run time. ABAQUS optimizes on the element wavefront number. This means that consecutive numbering of adjacent elements is the optimum manner in which to number them. This, however, becomes somewhat difficult with a 3-dimensional model. The way to optimize the model is to start numbering the elements at one corner and continue sequentially along the shortest side. When that row of elements is numbered, start with the adjacent row in the next shortest side of the model. Continue in this manner until the first layer is finished. When the first layer of elements is done, go to the next layer and number them in the same manner as the first layer. Do this until all the elements are numbered. This will give a reasonable wavefront number that is

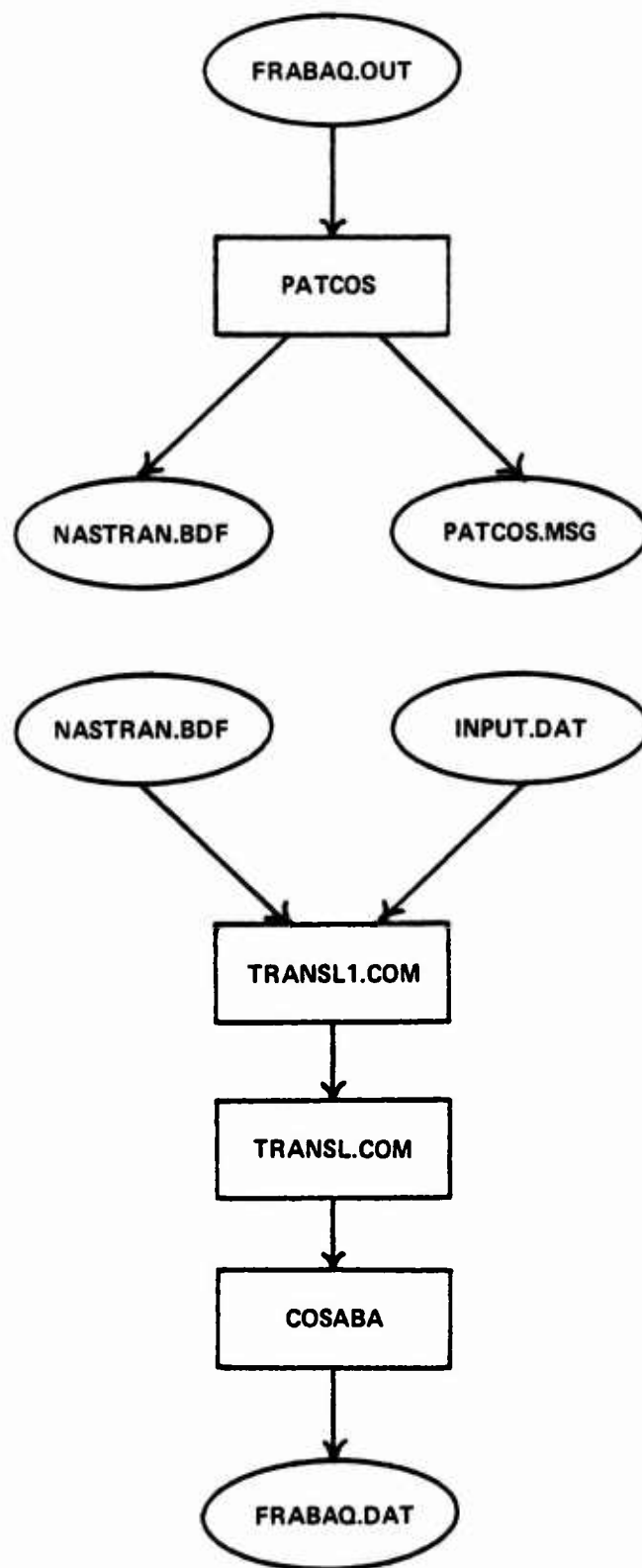


FIGURE 4. FORWARD TRANSLATION FLOW CHART

better than what would have been obtained from PATRAN-G directly without intervention. This was done on the flow restrictor model and saved substantial amounts of time for analysis runs.

Another part of the model definition was the boundary conditions. These consisted of symmetry conditions and actual constraints. The symmetry conditions were the x-z plane and this plane rotated 30 degrees in a counterclockwise direction about the z-axis. Both of these planes were constrained from motion perpendicular to the plane. For the x-z plane, this was simply a restriction in the y-direction. The rotated plane required the use of a \*TRANSFORM option card. It was put into a cylindrical coordinate system with the  $\theta$ -direction restricted from motion. Using the \*TRANSFORM option meant that all output was then done in the cylindrical coordinate system for the transformed nodes. This caused some problems when using the reverse translator ABAPAT and viewing the displacement results. More will be said about this in a later section. The two outer circular edges were restricted from motion in the radial direction. This required the use of another \*TRANSFORM card with the r-direction constrained from movement. Also, the x-y plane that connected these two edges was not allowed to move in the z-direction. This was all that was needed for the actual constraint conditions.

For the rest of the ABAQUS option cards mentioned, refer to the appropriate section where each is used for that part of the analysis. Those options that were used are listed below.

- \*PLASTIC
- \*HEAT TRANSFER
- \*FILM
- \*STEP, LINEAR=OLD
- \*FIELD
- \*TEMPERATURE

All of these options dealt with the history definition of the analysis except \*PLASTIC. This was used in the material properties definition.

#### MATERIAL PROPERTIES OF COLUMBIUM C-103

The material definition of the model consists of the known mechanical properties. The material used for the Mach 14 flow restrictor plate is Columbium C-103. What was needed by ABAQUS for the transient heat transfer and thermal stress analysis were the following:

1. Modulus of Elasticity as a function of temperature
2. Poisson's ratio as a function of temperature
3. Thermal conductivity as a function of temperature

4. Density
5. Specific Heat
6. Thermal Expansion Coefficient as a function of temperature
7. Yield Strength as a function of temperature
8. Plastic Strain as a function of temperature
9. Plastic Tangent Modulus as a function of temperature

Most of these properties were obtained from a memorandum written by Charles Rozanski (K23) on 23 December 1983. The rest were attained from graphs supplied by Robert Waser (K23). Appendix C gives the values for each of these properties along with the corresponding ABAQUS input. All of the \* option cards used are well defined in the ABAQUS User's Manual except the \*PLASTIC card. This one merits further explanation.

In order to arrive at the proper values needed on the \*PLASTIC card, one must have available stress-strain curves at different temperatures. A minimum of two temperatures is sufficient, but the more available, the better. The values needed are the yield stress point, failure stress point, and the associated strain values at both of these points. Two lines are used for each temperature. The first line has the yield stress, a zero value, and then the temperature on it. The second line has the failure stress, difference between the yield strain and the failure strain, and the same temperature as the first line on it. In this manner, by repeating the properties at different temperatures, a fairly good material model can be made. If the stress-strain curve was to be more accurately modeled, segments could be done in a linear piecewise fashion.

#### USER SUBROUTINE FILM

In order to make a transient heat transfer analysis, it is necessary to supply ABAQUS with a heat transfer film coefficient. This can be done in two ways. One way is to assume a constant value per element face throughout the run time of the computer code. The other is to assume that the film coefficient is non-uniform and changes during the run. Since the film coefficient is pressure and temperature dependent, it was thought best to input the coefficient as non-uniform. Also, due to the geometry of the flow restrictor, three different equations were needed to calculate the coefficient at different locations. With these restrictions in mind, it was decided to make use of a user subroutine within ABAQUS.

The user subroutine that was used is called FILM. A listing of FILM.FOR can be found in Appendix D. The theory behind the subroutine coding is presented here as well as a way of checking the subroutine for accuracy. Also

included in this section is the methodology needed to change the subroutine for a different set of conditions.

There were three equations used to define the film coefficients for this model. A memorandum by Mark Opeka (K22) dated 23 January 1984 was used to obtain two of these equations. The other equation was obtained from a memorandum by Robert Kavetsky (K23) dated 23 April 1980. With these three equations, the film coefficients could be determined on all of the surfaces that would experience heating.

On the front surface of the flow restrictor, the following equation was used.

$$\bar{h}_F = 0.228 \frac{K_f}{d} \sqrt{1 + \frac{d}{D}} \left( \frac{U_\infty d \rho_f}{\mu_f} \right)^{0.731} (Pr)^{1/3} \quad (1)$$

The Bartz equation

$$\bar{h}_N = 0.052 \frac{C_p}{D^{0.2}} \frac{\mu_f^{0.2}}{Pr^{0.6}} (U_\infty \rho_f)^{0.8} \quad (2)$$

was used for the nozzle section of the flow restrictor. On the back side of the flow restrictor, the equation

$$\bar{h}_B = 0.221 \frac{K_f}{d} \left( \frac{U_\infty d \rho_f}{\mu_f} \right)^{2/3} (Pr)^{1/3} \quad (3)$$

was used. For the vertical section of the step inside the nozzle, an average of Equations (1) and (2) was used to determine the film coefficient. On the flange section that sticks out in the back, the coefficient was calculated as an average of Equations (2) and (3). These two equations take on the following form.

$$\bar{h}_V = \frac{1}{2} (\bar{h}_F + \bar{h}_N) \quad (4)$$

$$\bar{h}_f = \frac{1}{2} (\bar{h}_N + \bar{h}_B) \quad (5)$$

The variables used in Equations (1), (2), and (3) are defined below.

$K_f$  = Gas thermal conductivity at film temperature

$d$  = Effective wetted surface diameter

$D$  = Diameter of external duct or nozzle

$U_\infty$  = Free stream gas velocity

$\mu_f$  = Gas dynamic viscosity at film temperature

$\rho_f$  = Gas density at film temperature

$Pr$  = Prandtl number, taken as a constant equal to 0.74

$C_p$  = Specific heat at constant pressure, taken as a constant equal to 0.295 Btu/lb °R

In calculating  $U_\infty$ , the mass flow rate used was for Mach 14 conditions. This is given as 128.3668 lbm/sec. The velocity is now found at any point by rearranging the mass flow equation.

$$U_\infty = \frac{\dot{m}}{\rho A} \quad (6)$$

where:  $\dot{m}$  is the mass flow rate

$\rho$  is the density at the free stream temperature

$A$  is the area of flow passage

The free stream temperature is defined by the user as the sink temperature. This is one of two variables defined by the user in subroutine FILM for use by ABAQUS. The other is the heat transfer film coefficient. The sink temperature follows the curve as depicted in Figure 5. At time equal to zero, the sink temperature is taken as being 70°F. It was found that a sink temperature of 0°F at time equal to zero caused numerical difficulties.

To calculate the area of flow at a particular point in the restrictor plate, one had to look at the dimensions of the plate. This was done for each surface that was seeing flow and tabulated in Table 1. Also included in Table 1 are the associated element sets and diameters used at these points. The wetted surface diameter is found from the surface area perpendicular to the gas flow. Knowing the surface area, the wetted surface diameter is the corresponding diameter that would give the same area.

In determining the pressure at a certain point, one must be aware of the wind tunnel run conditions. For this particular analysis, the pressure on the

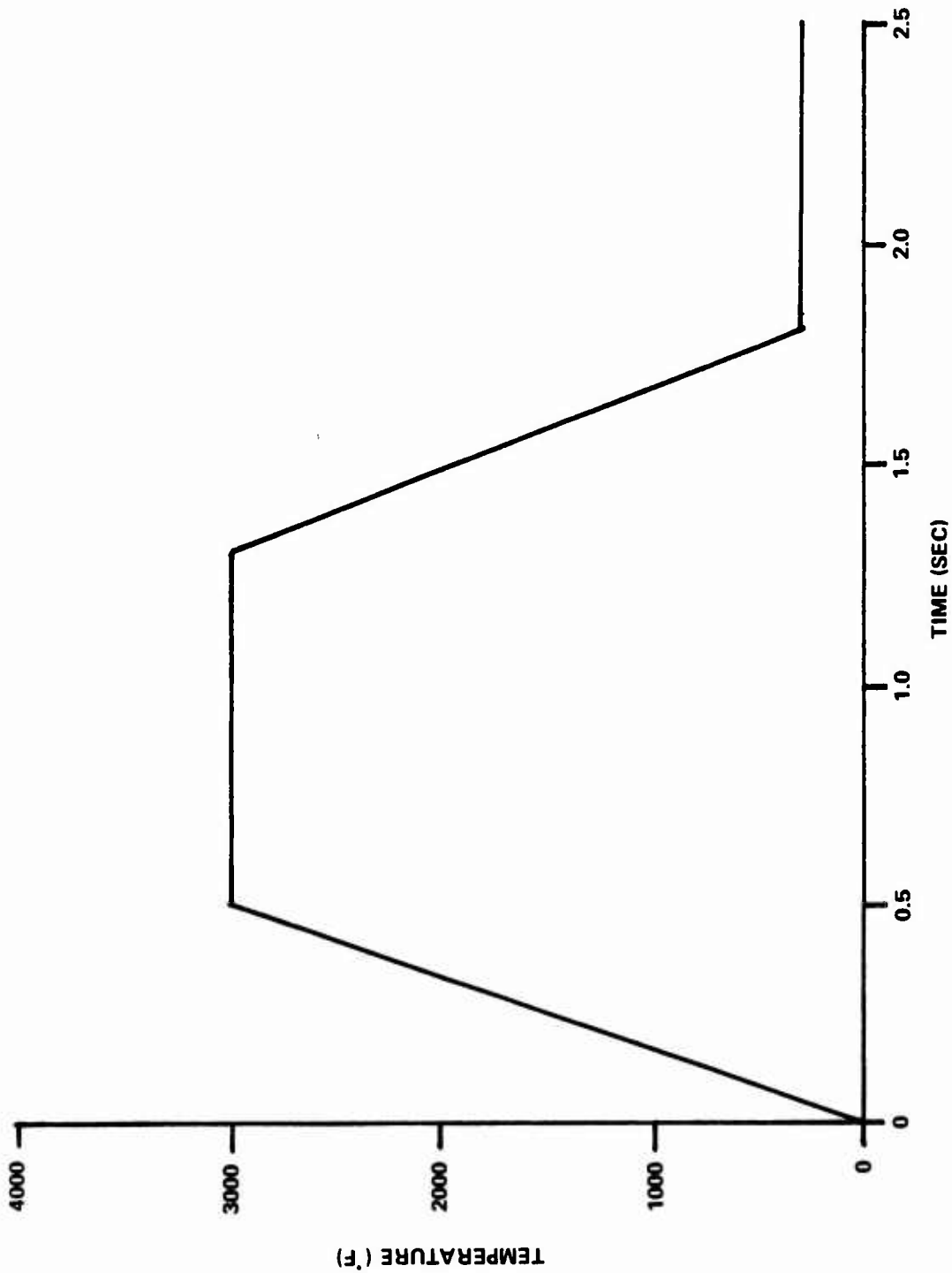


FIGURE 5. SINK TEMPERATURE VS. TIME



TABLE 1. DIAMETER, AREA, AND PRESSURE FOR EACH ELEMENT SET

ELEMENT SET	DIAMETER D (IN)	WETTED DIAMETER d (IN)	AREA (FT <sup>2</sup> )	PRESSURE (PSI)
FSUR1	5.25	4.9024	0.150330	22,000.0
HOL13	0.71	----	0.002749	21,500.0
HOL14	0.71	----	0.002749	21,500.0
HOL16	0.71	----	0.002749	21,500.0
FSUR2	0.71	0.5408	0.002749	21,500.0
HOL2	0.46	----	0.001154	21,500.0
HOL3	0.468	----	0.001192	21,000.0
HOL4	0.482	----	0.001270	21,000.0
HOL5	0.498	----	0.001351	21,000.0
HOL6	0.515	----	0.001447	20,500.0
HOL7	0.535	----	0.001561	20,500.0
RSUR1	---	2.3358	0.041097	20,000.0
FLNG1	0.545	2.3358	0.001620	20,500.0
FLNG2	2.745	2.3358	0.041097	20,000.0
RSUR2	---	1.7400	0.057610	20,000.0

front surface was 22,000.0 psi and 20,000.0 psi on the back surface. In between these two locations, pressure values were assigned between 20,000.0 and 22,000.0 psi. All of these values are listed in Table 1.

To calculate the remaining 3 values, gas thermal conductivity, dynamic viscosity, and density, a separate subroutine was used which is called FINTERP. This subroutine returns the value for each of these by interpolating from a user supplied table of values. These tabulated values are a function of pressure and temperature (see Tables 2, 3, and 4). At this point, the film temperature was used as an input to subroutine FINTERP. It is given as the average between the free stream (sink) temperature and the wall temperature.

$$T_f = \frac{1}{2} (T_\infty + T_w) \quad (7)$$

Given the pressure and temperature from Equation (7), the proper values are found by FINTERP and then used in subroutine FILM.

Subroutine FILM was written so that this procedure would be done transparent to the user. All of the theory behind the equations has been outlined above and coded in the subroutine. This was first checked out for accuracy by using the program FILMTEST which is included in Appendix D. All that FILMTEST did was to exercise subroutine FILM and give the user output. With this output, the user could make sure that subroutine FILM was working properly. This was accomplished without having to run ABAQUS and resulted in appreciable time and cost savings.

This subroutine was written solely for the Mach 14 flow restrictor problem and model. It was not intended to change except for different run conditions. Both the temperature and pressure are easily altered and doing this is straightforward. In changing the pressure values, all that is needed is a redefinition of the PRESSFS array values. Each location corresponds to one element set and the pressure differential should be divided in some way between them (see Table 1 for example). The temperature profile is not quite as easy, but not difficult nonetheless. As long as the profile can be put into equation form as a function of time, there is no problem. Just replace the coding for defining the sink temperature. Additional data may also be needed for the density table in FINTERP depending on the pressure values used in array PRESSFS. The program will extrapolate outside of the current values, but if more accuracy is desired, additional values will have to be added to the table. With these changes, many different run conditions can be analyzed to identify potential problems. All that is needed now is to complete the history definition of the ABAQUS input.

TABLE 2. DYNAMIC VISCOSITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	14.6959	14,695.9	29,391.8
VISCOSITY (lb/hr • ft)			
TEMPERATURE (°R)			
750	0.053	0.099	0.18
1000	0.635	0.118	0.18
1500	0.084	0.125	0.1825
2000	0.104	0.14	0.186
2500	0.119	0.153	0.191
3000	0.133	0.165	0.2
3500	0.147	0.176	0.21

TABLE 3. THERMAL CONDUCTIVITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	14.6959	14,695.9	29,391.8
TEMPERATURE (°R)	CONDUCTIVITY (Btu/hr • ft °R)		
750	0.0205	0.0435	0.08
1000	0.252	0.0475	0.0805
1500	0.0339	0.055	0.083
2000	0.042	0.0625	0.086
2500	0.0495	0.0695	0.09
3000	0.0565	0.076	0.096
3500	0.064	0.082	0.102

TABLE 4. DENSITY AS A FUNCTION OF PRESSURE AND TEMPERATURE

PRESSURE (PSI)	20,000.0	20,400.0	20,800.0	21,200.0	21,600.0	22,000.0
DENSITY (lb/ft <sup>3</sup> )						
TEMPERATURE (°R)						
760	33.2401	33.5083	33.7726	34.0331	34.2900	34.5435
835	31.6982	31.9658	32.2295	32.4894	32.7457	32.9985
1210	25.9477	26.2139	26.4751	26.7316	26.9838	27.2319
1585	21.9185	22.2011	22.4763	22.7444	23.0060	23.2614
1960	18.7722	19.0428	19.3112	19.5778	19.8436	20.1073
2335	16.4698	16.7145	16.9571	17.1975	17.4360	17.6724
2710	14.6965	14.9216	15.1447	15.3660	15.5853	15.8029
3085	13.2777	13.4865	13.6936	13.8991	14.1029	14.3051
3460	12.1128	12.3076	12.5009	12.6928	12.8833	13.0724

## TRANSIENT HEAT TRANSFER ANALYSIS

In making a transient heat transfer analysis, there are a number of variables that need to be defined by the user. They have to do with either the accuracy of the solution or the time stepping of the analysis. All of these are associated with the \*HEAT TRANSFER option card. The values input from this card and also the \*FILM card make up the history definition for a run.

When choosing the values for the \*HEAT TRANSFER card, one must be careful as these variables greatly impact the computer run time. The finite element model also determines to some extent the values used for the time step. For the values used, please refer to Appendix E. The time stepping values used are thought to be the best possible at this time. The values for TEMTOL and DELMAX are not necessarily the best. Further studies would have to be done, which were outside the scope of this problem, in order to determine the optimum values. What was chosen worked well for this particular analysis.

In contrast to the \*HEAT TRANSFER values, those used in conjunction with the \*FILM card are rigidly set by the problem. There should be no reason to change these values because of different wind tunnel conditions. These correspond to the face of each element that requires a film coefficient for transient heat transfer analysis. The fact that the description was taken as non-uniform automatically called user subroutine FILM. The user need do nothing except supply the subroutine FILM when making the computer run. This is done when the command procedure file ABAQUS1.COM is executed. Appendix F contains a listing of this file along with a listing of ABAQUS.COM.

Once the ABAQUS input file was completed, the analysis was submitted using the procedure files mentioned above. This is relatively straight-forward and will not be discussed here. After the analysis is completed and the results obtained, another translation was done between ABAQUS and PATRAN-G. This was done with the nodal results file and the procedure outlined in the next section.

## RESULTS TRANSLATION FROM ABAQUS TO PATRAN-G

After the nodal results file was obtained, translation could be made back to PATRAN-G so as to look at the results graphically. This was done with the procedure files and program listed in Appendix G. The program, ABAPAT.FOR, will only translate nodal results. The capability to translate element results does not exist at present and will not in the near future. In order to get element values at node points, it was necessary to use the fourth card in the \*EL FILE input stream. These were all nodal averaged values, and were helpful in visualization of the stress and strain fields of the flow restrictor.

One problem that occurred in translation from ABAQUS to PATRAN-G was with displacements. Because of the use of \*TRANSFORM cards in applying some of the boundary conditions, difficulty arose in getting the proper coordinate system

and values for displaced nodes. ABAQUS does not translate displacements back into global coordinates for printed output or file results. The values were output in the local (transformed) coordinate system. In order to use PATRAN-G to look at the displacement results, it was necessary to translate the values back into the global coordinate system. This was done within the ABAPAT program by adding the coordinate frame transformation capability to the coding. With this addition to ABAPAT, the translation process could be completed.

The translation of results into the proper PATRAN-G format is initiated by typing the command

\$ @WRIT1

and then answering the questions asked by WRIT1.COM. The first one asked is about the TITLE.DAT file. This file consists of four lines with the first three being a title supplied by the user. These are 80 character lines that will be used as title information for any post-processing done with PATRAN-G. The fourth line is either .TRUE. or .FALSE., and depends on whether or not some nodal data needs to be transformed. This line will also determine the response to the next question asked by WRIT1.COM. This question will ask for the file containing the nodes to be transformed within ABAPAT. The first line of this file (TRANS.DAT in Appendix G) is the number of nodes. The second and following lines are the nodes that will need to have some results transformed into global coordinates. These are in I6 format with 15 values per line. After these two questions are answered, the last question asked is which nodal results file is to be used. This is the results file from the ABAQUS run. The results will then be translated and usable with PATRAN-G. Figure 6 is a flow chart of this reverse translation process.

#### TRANSIENT HEAT TRANSFER RESULTS

With both the visual results of PATRAN-G and the printed output (see Appendix H), a determination was made as to what increment of the step should be used for the thermal stress analysis. This was expected to occur sometime during the maximum sink temperature. In viewing the results of the heat transfer analysis, it was decided that the worst temperature gradient occurred near the 0.5 second mark in the run. Figure 7 shows this particular gradient. this was then used for the \*TEMPERATURE input in the thermal stress analysis.

The computer run time for this analysis was about 18 cpu hours. The main reason for such a long run time was the large wavefront number of the model. Originally the wavefront was 843, but this was reduced to 528 by optimizing the element numbering. This was done in the manner outlined in a previous section. With this change in the wavefront number, it is expected the analysis would take approximately 6 cpu hours.

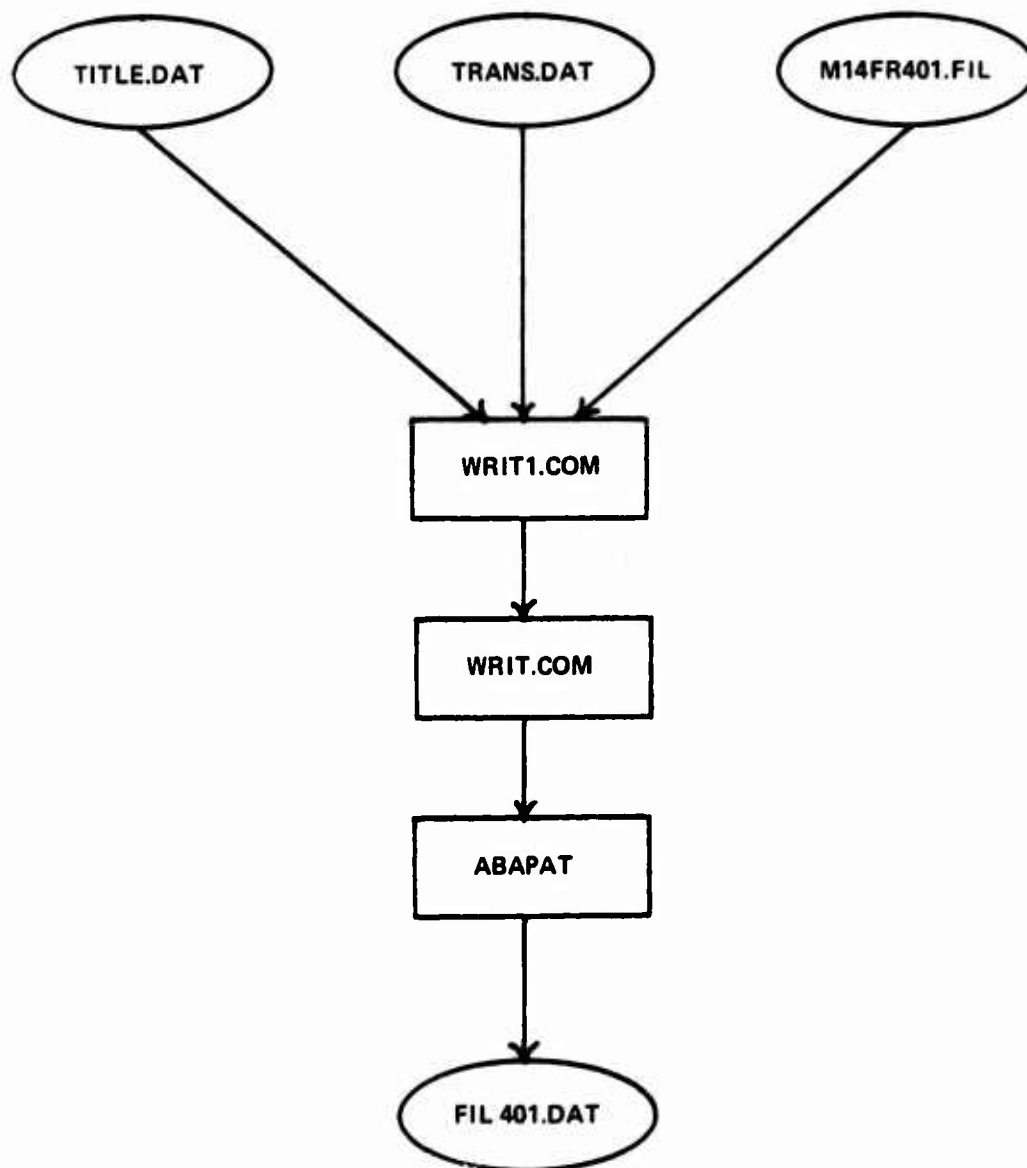


FIGURE 6. REVERSE TRANSLATION FLOW CHART



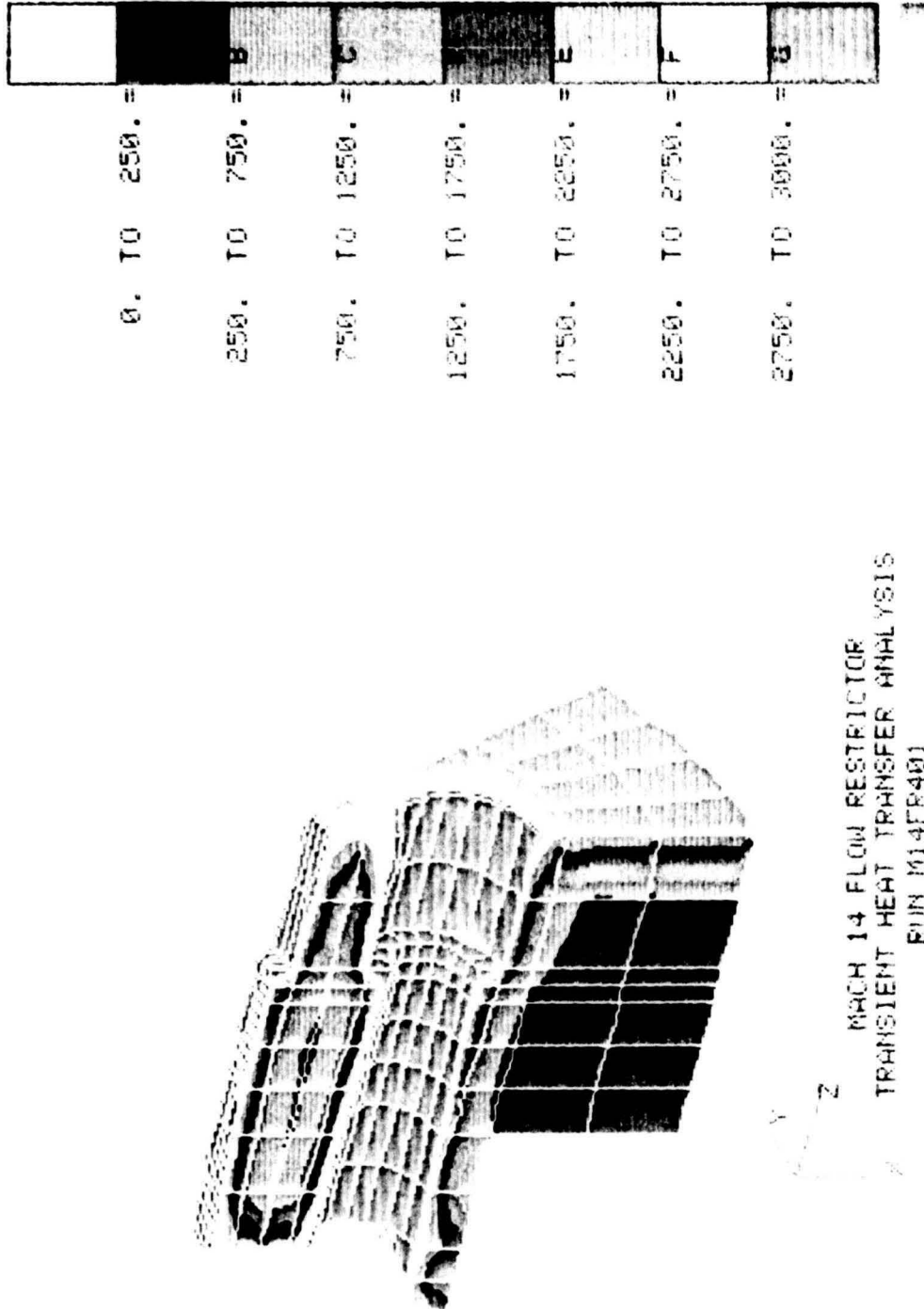


FIGURE 7 TEMPERATURE GRADIENT AT TIME EQUALS 0.57 SECONDS

## THERMAL STRESS ANALYSIS

The thermal stress analysis used the results of the transient heat transfer analysis. The temperature gradient selected not only supplied the proper thermal load, but also allowed material properties to be evaluated at the correct temperature. All of the material properties were temperature dependent, so this became an important factor. This was accomplished by using the \*FIELD card.

In making the thermal stress run, it was decided to do the analysis in two parts. The first step was the pressure loading at the proper temperature. The pressure was put on the same element faces as the film coefficients using the \*DLOAD card. The values used are those listed in Table 1. This step was taken to be linear and static as it was not expected that the pressure loading would cause any of the material to plastically yield.

Unlike the pressure loading, the thermal loading was not expected to be linear. But, due to the large run time involved with non-linear analysis, it was decided to also run the temperature load as linear static. Here is where the \*TEMPERATURE card was used as input to apply the thermal load. This made up the second step of the thermal stress analysis.

Both of these steps were run within one ABAQUS analysis. The pressure was done first so as to see the effects on the flow restrictor plate. Then the thermal load was added for the combined effect. This was accomplished by using the option card \*STEP, LINEAR=OLD. As a result of this card, ABAQUS does not recalculate the stiffness matrix for the new loading and saves an enormous amount of computer time in the process. Since both the \*FIELD and \*TEMPERATURE cards were used, ABAQUS tried to open too many scratch files. This caused a fatal error and an end of execution within ABAQUS. This problem was solved by adding CORE=1000000.0 to the \*HEADING card. The analysis was run with reduced integration elements. Instead of 27 integration points per element, only 8 points were used. It was hoped this would also lower the cpu run time, but it seemed to have little, if any, effect. As a result though, less output would be available due to only 8 points per element. Some accuracy of results may have been lost, but the effects were not noticeable. Appendix 1 contains a listing of the thermal stress analysis input file.

## THERMAL STRESS RESULTS

The results of the thermal stress analysis were viewed using PATRAN-G via the ABAPAT translator. This included the displacement results and the stress-strain fields. Figures 8-14 show some of these results and each of these will be discussed in the following paragraphs.

Figure 8 shows the Von Mises stress field due to the pressure loading. The range of values is 4,780 to 42,100 psi. Overall, not much of the plate is in

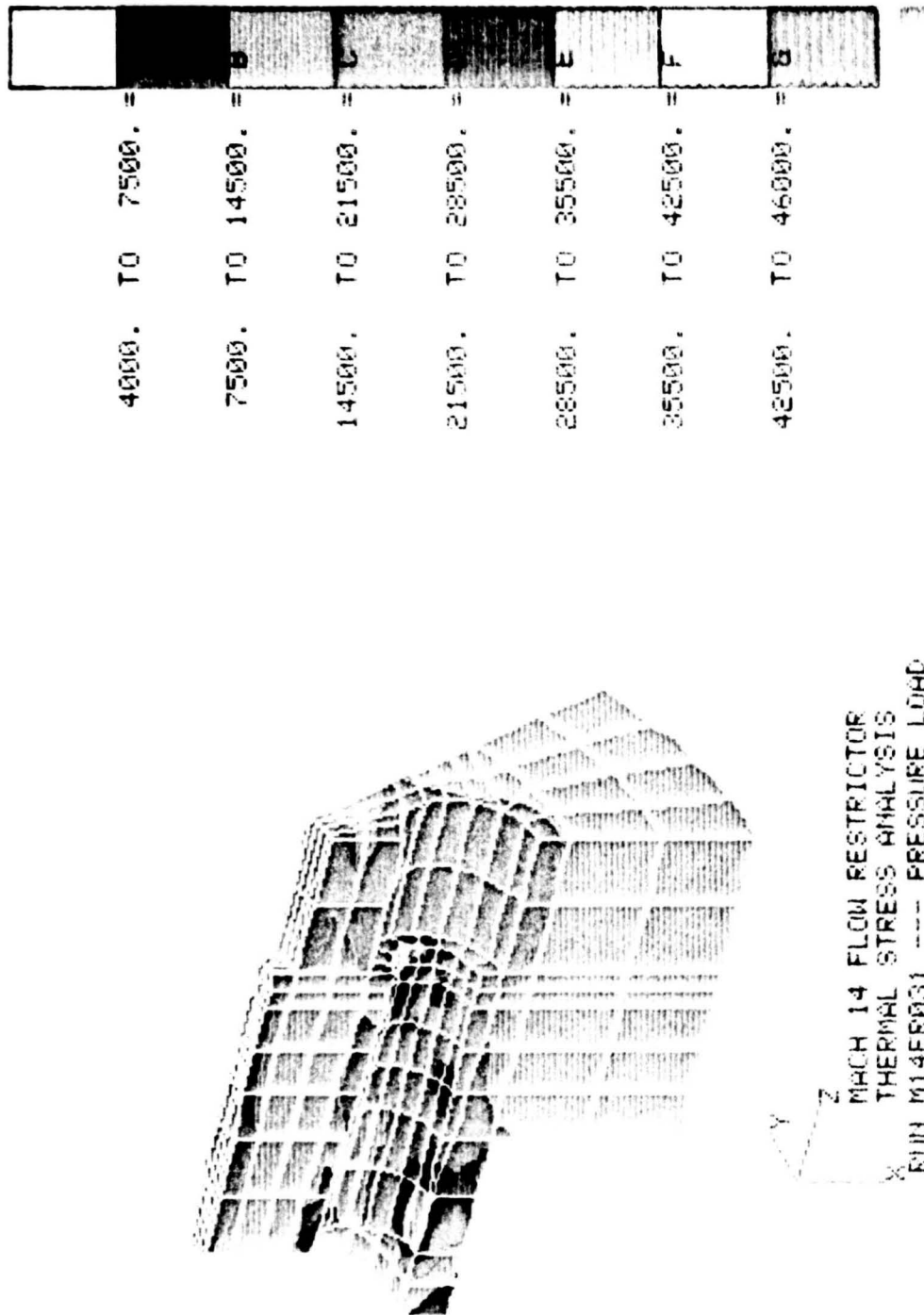


FIGURE 8. VON MISES STRESS FIELD -- PRESSURE LOAD ONLY

yielding at this temperature gradient for just the pressure loading. In looking at the deformed displacement plots corresponding to this stress field (see Figure 9), nothing surprising is seen. These correspond well to what happens according to classical theory and anticipated results.

The next figure (see Figure 10) is the Von Mises stress field for the combined thermal and pressure load. Here, much of the flow restrictor is yielding, and at very high magnitudes. The corresponding range of values is 4,400 to 205,000 psi. Even at room temperature, vast portions of the plate are yielding. By looking at Figures 11, 12, and 13, it is seen that most of this yielding is in compression. Figure 11 is the r-direction stress field and Figure 12 is the  $\theta$ -direction stress field. These are the radial and hoop stress respectively. The z-direction stress field is shown by Figure 13 and represents the axial stress. The range of values for these three figures all fall between -298,000 and 84,300 psi. The greatest range occurs in the hoop stress (see Figure 12), with corresponding strain values of -0.005 to 0.015 inches per inch. This clearly shows what effect a large thermal gradient will have on a stress field. It becomes even more apparent when viewing the deformed displacement plots (see Figure 14). The bulge in the middle of the plate was not unexpected and corresponds well with what is seen in actual wind tunnel runs. The maximum displacement is about 0.006 inches.

Appendix J contains a listing of all the thermal stress results mentioned above. From this data and the corresponding figures presented in this report, it is found that severe compressive yielding is occurring in much of the flow restrictor plate. This is a potential problem and warrants further study in the future.

## RESULTS AND CONCLUSIONS

The results that were obtained with both of the analyses were expected and made sense. For the given supply conditions, the temperature gradient arrived at with the transient heat transfer analysis was within reason and proved to be accurate. It was proven by the results from the thermal stress analysis.

This analysis predicts that there is extensive compressive yielding occurring in a large portion of the Mach 14 flow restrictor plate. In reality this is true. The plate does have a permanent set in it after a wind tunnel run. The middle of the plate actually bulges out, just as exhibited in Figure 14. To my knowledge, the strains on the flow restrictor have never been measured, but I'm confident they would compare with those arrived at in this analysis.

In conclusion, I would say that this analysis was accurate and of value to the Wind Tunnel #9 Safety Committee. It verifies what has been observed by a computer analysis and gives at least relative numbers for stresses, strains, and displacements. It is a valid analysis and can be used as a guide for subsequent analysis at different conditions.

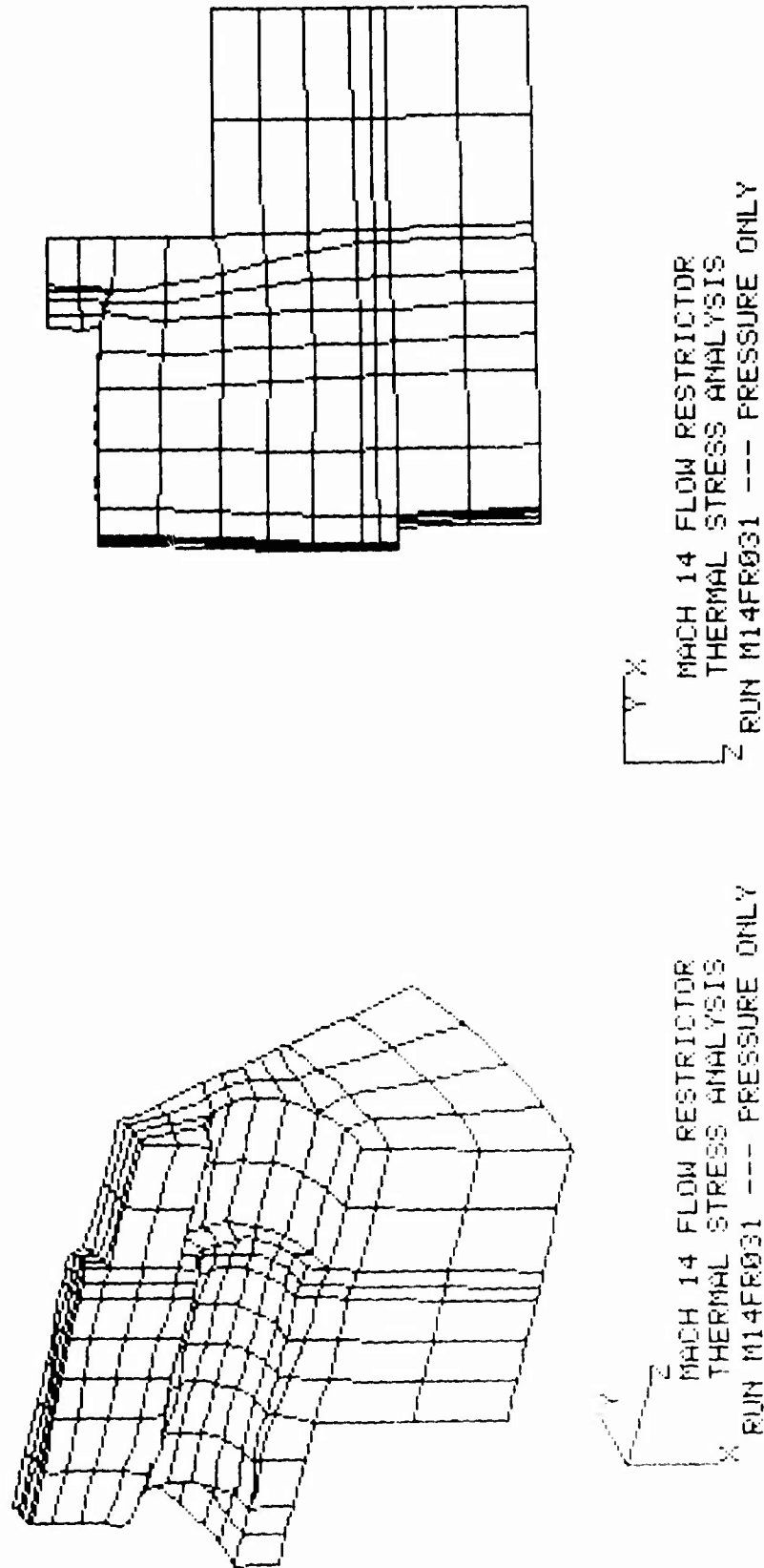
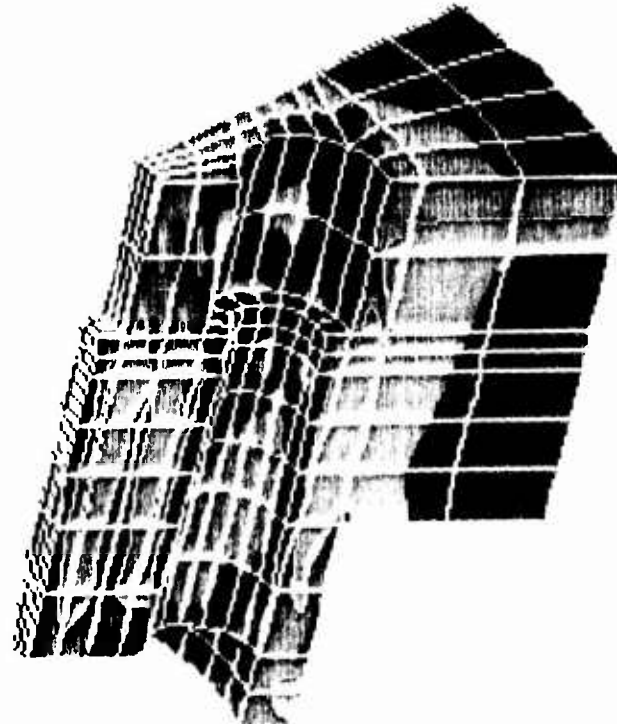
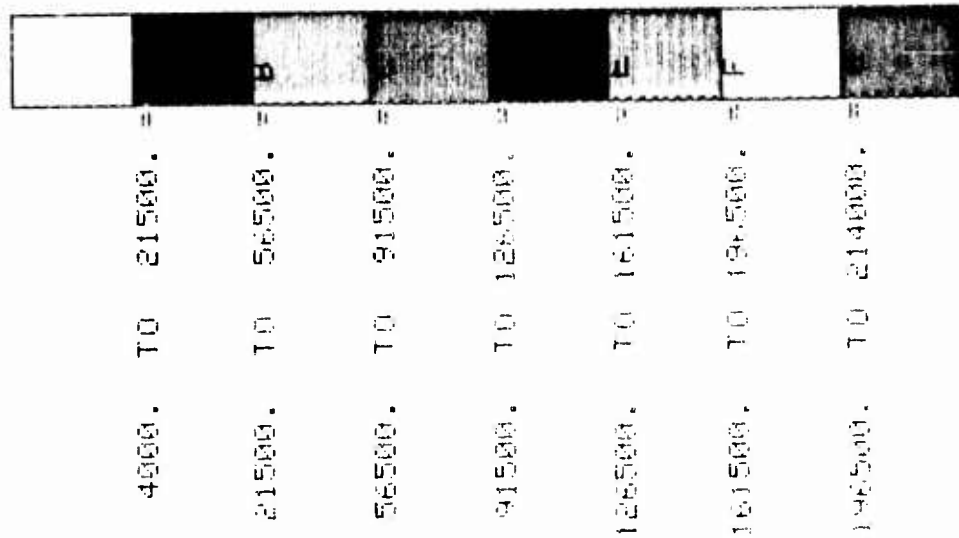
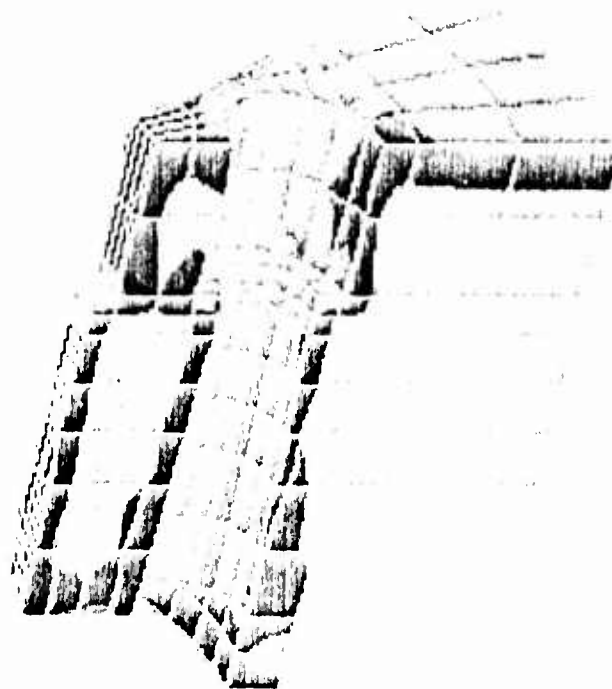
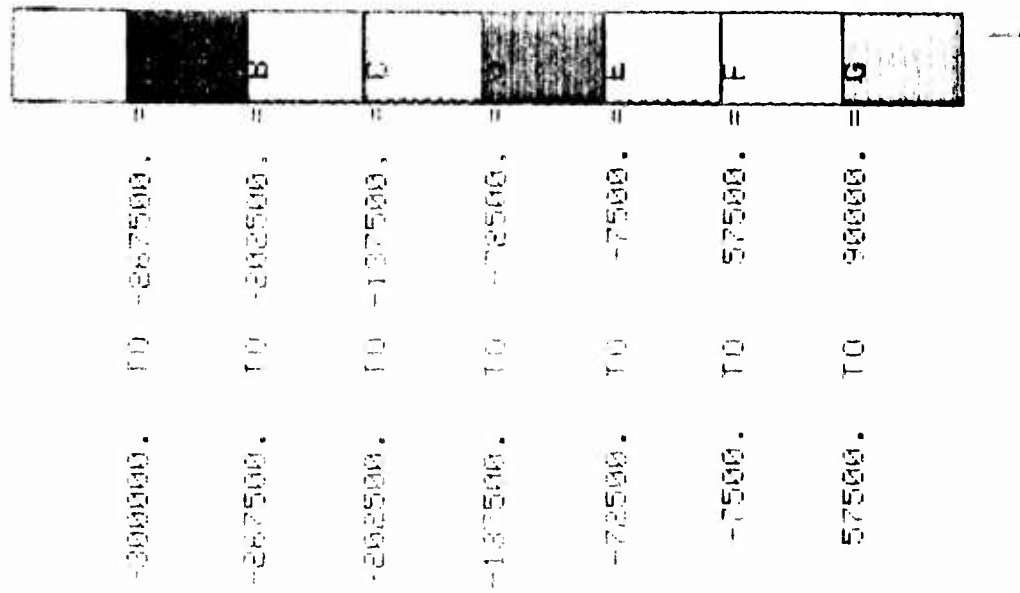


FIGURE 9. DEFORMED DISPLACEMENT PLOT - PRESSURE LOAD ONLY



MACH 14 FLOW RESTRICTOR  
 THERMAL STRESS ANALYSIS  
 PLOT 1014FF001 ---- PRESSURE AND TEMPERATURE LOAD

FIGURE 10 VON MISES STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



MACH 14 FLOW RESTRICTOR  
THERMAL STRESS ANALYSIS  
PUN M14FR001 --- PRESSURE AND TEMPERATURE LOAD

FIGURE 11.  $\sigma_x$  STRESS FIELD - PRESSURE AND TEMPERATURE LOAD

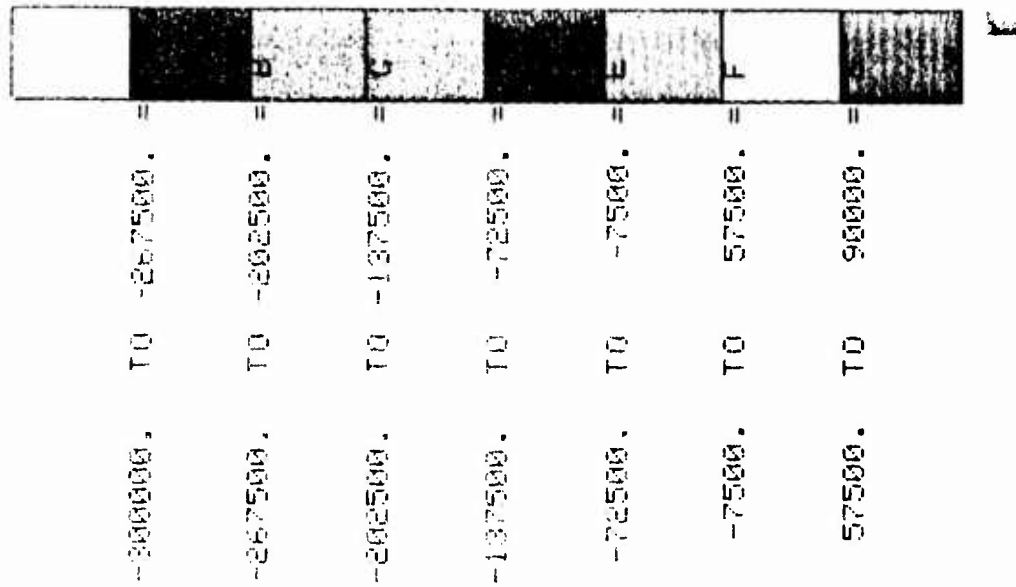
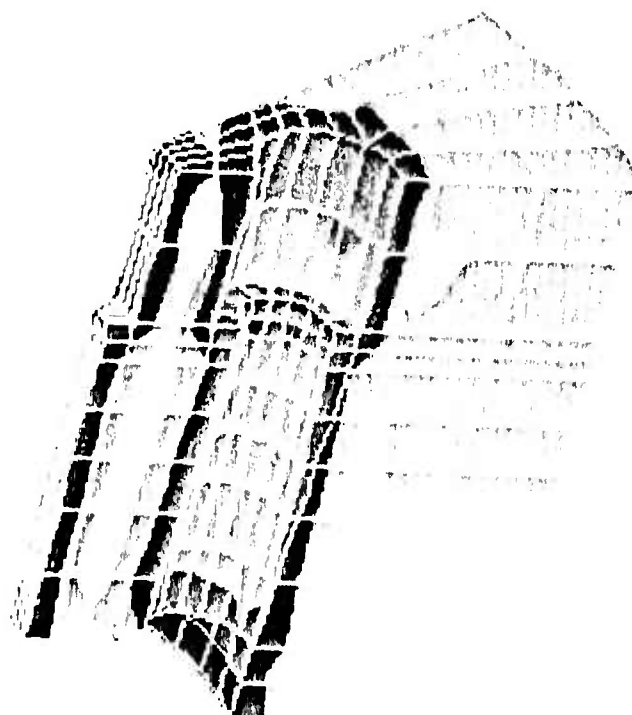
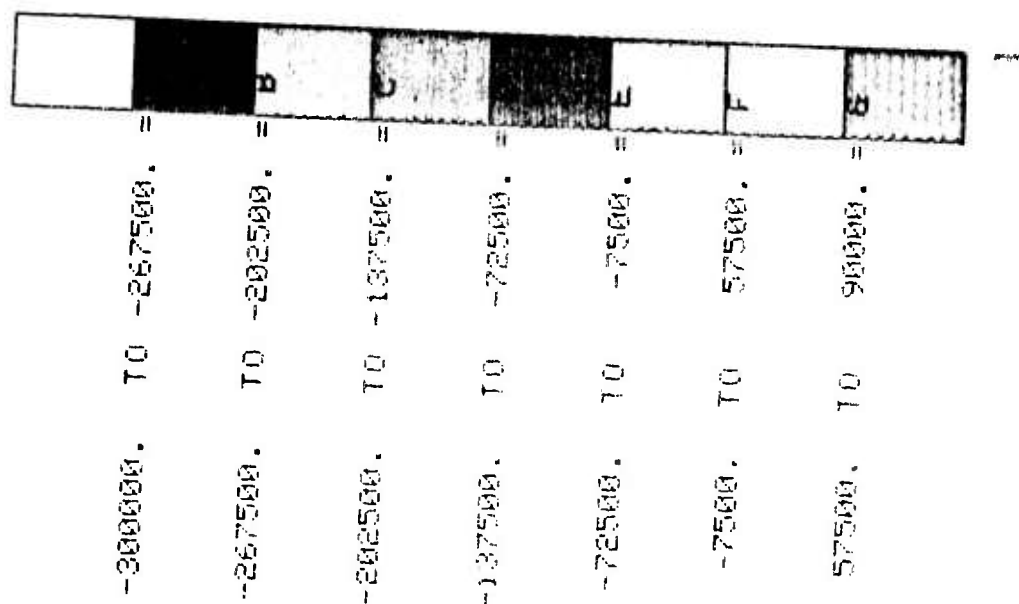


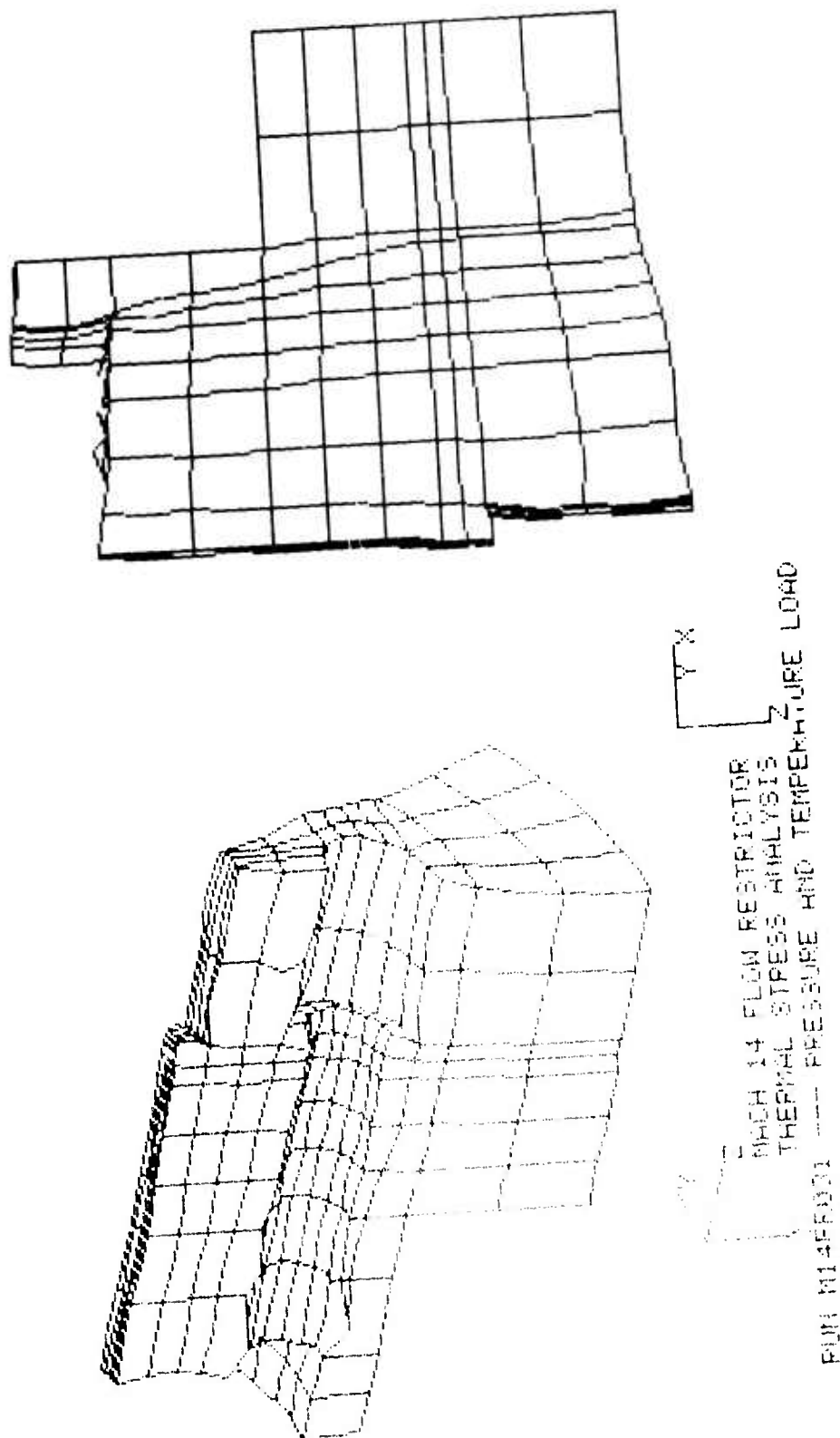
FIGURE 12.  $\sigma_y$  STRESS FIELD - PRESSURE AND TEMPERATURE LOAD





MACH 14 FLOW RESTRICTOR  
THERMAL STRESS ANALYSIS  
R04 M14FR031 --- PRESSURE AND TEMPERATURE LOAD

FIGURE 13.  $\sigma_z$  STRESS FIELD - PRESSURE AND TEMPERATURE LOAD



## RECOMMENDATIONS

In order to further investigate this problem, more analysis needs to be done. Not only a nonlinear thermal stress analysis, but a fatigue analysis as well. The nonlinear analysis will give more accurate strain and stress values, as compressive yielding is obviously occurring in a large portion of the flow restrictor plate. The fatigue calculations will give some idea as to how many times the plate may be able to withstand this particular loading.

If the loading is changed for a wind tunnel run, this procedure can be used to arrive at preliminary results of stresses and displacements. It is my opinion that a larger pressure differential will cause even more compressive yielding. This in turn will weaken the plate and cause it to be unusable sooner. In view of this, care must be taken if structural integrity is to be maintained for this particular wind tunnel component. An analysis of this type should be completed for any new tunnel run condition before the run is actually made. Then, the possible effects may be seen and a decision made as to whether or not the tunnel will be run at the new conditions.

APPENDIX A

PATRAN-G MODEL GENERATION PROCEDURE FILES

```

GD
1
1
2
SET, LAB1, OFF
SET, LINES, 0
GR, 1, , 23//2.79
GR, 2, , 355//2.79
GR, 3, , 1 33//2.79
GR, 4, , 1.455//2.79
GR, 5, , 1 625//2.79
GR, 6, , 2 625//2.79
DATA, 1, 5(0), 1.30.
LI, 8#, ARC, D1, 1/2/5/6
DATA, 2, 1 1.2(0), 1.1.0, 1.150.
LI, 8#, ARC, D2, 3/4
LI, 40, ST, , 10, 12
GR, 40, TR, /, 5, 21
GR, 41, TR, /, 7, 19
GR, 42, TR, /, 5, 20
LI, 3#, ST, , 21/20/19, 40/42/41
GR, 23T25, INT, , 40, 41T43
LI, 40T#, DEL
GR, 40T#, DEL
LI, 17T20, ST, , 21/23/24/19, 23T25/25
PA, 1/2/9/10, 2L, , 1/3/2/4, 3/16/4/17
PA, 6/5/4/3, 2L, , 9T12, 13T16
PA, 7/8/11T14, 2L, , 13/5/15/14/20/6, 5/7/18/19/6/8
PA, 11, LAB, , 21/20
PA, 12, LAB, , 20/19
PA, 1T14, REV
PA, 15T28, TR, //- 79, 1T14
PA, 29T42, TR, //- 189, 15T28
GR, #, , 2725// 36
GR, #, , 4// 36
GR, #, , 7// 36
GR, #, , 1 3725// 36
GR, #, , 1 625// 36
GR, #, , 2 625// 36
LI, 4#, ARC, D1, 76/77
LI, 27T30, ARC, D1, 80/81
LI, 50/51, ARC, D1, 79
LI, 31T34, ARC, D2, 79
LI, 35T38, ARC, 1 1/2(0)/1 1/0/1/-180, , 78
LI, 38, DEL
LI, #, ARC, D1, 79
GR, 90, INT, , 50, 37
Y
LI, 25/26, BR, 90, 52
LI, 50T#, DEL
LI, 50, ST, , 85, 91
GR, 200/201, TR, /, 5, 96/97
LI, 2#, ST, , 96/97, 200/201
GR, 99/100, INT, , 50, 51/52
LI, 38T40, ST, , 96/99/97, 99/100/100
LI, 50T#, DEL
GR, 200/201, DEL
LI, 37, ST, , 97, 90
S
LI, 35/36, REV
LI, 21T40, PL
PA, 57/58, 2L, , 21/23, 23/35

```

PA. 59T62, 2L, , 34/33/32/31, 35T37/25  
 PA. 63T66, 2L, , 25/27/22/24, 27/29/24/38  
 PA. 69T70, 2L, , 40/26/28, 26/28/30  
 PA. 67, 2L, , 36, 39  
 PA. 67, LAB, , 96/97  
 PA. 57T70, REV  
 PA. 2#, TR, //- , 36, 63/69  
 PA. 50/56, TR, // , 68, 64/70  
 GR. 300, , //1, 04  
 LI. 2#, ST, , 300/300, 110/112  
 PA. 80, 2L, , 41, 42  
 HP. 1/2/3, 2P, , 16/21/22, 2/7/8  
 HP. 5#, 2P, , 24T28, 10T14  
 HP. 14#, 2P, , 29T42, 15T28  
 HP. 30/36, 2P, , 50/56, 36/42  
 HP. 60T71, 2P, , 57T63/65T69, 29T35/37T41  
 FA. 10#, HPAT, 1, 60T68/71  
 PA. 6#, HPAT, 2, 62T64/66/68/71  
 FA. #, HPAT, 4, 69  
 PA. 98, HPAT, 1, 70  
 LI. 18#, INT, 1, 80, 81T98  
 PA. 43T49, 2L, , 43T49, 44/53/53T55/49/56  
 LI. 48, REV  
 PA. 48, 2L, , 48, 49  
 Y  
 PA. 51T55, 2L, , 50/51/54/60/52, 51/57/59/52/58  
 LI. #, PAT, 1, 54  
 PA. 200, 2L, , 60, 52  
 PA. 54, 2L, 200, 55, 61  
 Y  
 FA. 45, LAB, , 306/316  
 PA. 48, LAB, , 309/310  
 PA. 51, LAB, , 302/304  
 PA. 52, LAB, , 304/316  
 PA. 53, LAB, , 316/317  
 FA. 54, LAB, , 317/311  
 PA. 55, LAB, , 311/108  
 PA. 43T49/51T55, REV  
 HP. 23T29, 2P, , 43T49, 29T35  
 HP. 31T35, 2P, , 51T55, 37T41  
 HP. 37T43, 2P, , 57T63, 43T49  
 HP. 44T48, 2P, , 65T69, 51T55  
 HP. 49/50, 2P, , 71/72, 63/69  
 GR. 300, DEL  
 LI. 41/42, DEL  
 PA. 1/3T6/9/80T99/200, DEL  
 HP. 60T71, DEL  
 VIEW  
 1  
 23, 56  
 HP. 1T50, PL

```

GO
3
2
1
LOC. 1
SET. PH1. OFF
SET. LABEL. OFF
ERASE
CF. H1/3T6/5/10/16/18T20/22/38/45T47. . 3/3/3
CF. H2/7/9/11T15/17/21/37/39T44/48T50. . 2/3/3
CF. H23/25T29/31/35. . 2/3/4
CF. H24/30/32T34/36. . 3/3/4
END
2
CF. HIT50. HEX/20
END
3
N
2
1
1
1
3
PF. HIT50. HEX/20. . 1
END
3
4
1
1
FLOW RESTRICTOR ANALYSIS
N
STOP

```

APPENDIX B

MODEL TRANSLATION FROM PATRAN-G TO ABAQUS FILES



```
*****  
*  
* PATCOS VERSION 1 4 *  
* PDA ENGINEERING *  
*  
*****
```

Translation of PATRAN-G neutral file to COSMIC/NASTRAN bulk data file

----- Program Diagnostics -----

PATRAN-G input file:  
FRABAQ OUT  
FLOW RESTRICTOR ANALYSIS  
16-JAN-84 10 02 45 1.5

NASTRAN output file:  
NASTRAN BDF  
FLOW RESTRICTOR ANALYSIS  
16-JAN-84 10:10 54

-----  
1952 GRID record(s) written on "NASTRAN BDF"

-----  
328 CXXXX record(s) written on "NASTRAN BDF".  
-----

----- Translation done -----  
2280 logical records ( 2936 card images)  
have been written on file "NASTRAN BDF".

```

$ INQUIRE INT "Input data file (or RETURN for INPUT.DAT)"
$ IF INT .EQS. "" THEN INT="INPUT.DAT"
$ INQUIRE DFILE "NASTRAN input file name (or RETURN for NASTRAN.BDF)"
$ IF DFILE .EQS. "" THEN DFILE="NASTRAN.BDF"
$ INQUIRE ABAQ "ABAQUS output file identifier (or RETURN for ABAQUS.DAT)"
$ IF ABAQ .EQS. "" THEN ABAQ="ABAQUS.DAT"
$ SUBMIT/NOPRINTER/PARAMETERS=('INT', 'DFILE', 'ABAG') TRANSL.COM
$ EXIT

```

4K29ZZSAF  
\* RENAME TRANSL LOG DUAO [EBECKER PATRAN]TRANSL LOG  
\* SET DEF DUAO [EBECKER.PATRAN]  
\* ASSIGN 'P1' FOR008  
\* ASSIGN 'P2' FOR003  
\* ASSIGN 'P3' FOR004  
\* RUN PATRAN\$DIR COSABA

```

C
C *****
C * PROGRAM TO CONVERT PATCOS OR PATNAS OUTPUT TO ABAGUS FORMAT *
C * (NODES AND ELEMENTS ONLY) *
C *****
C
C
C PROGRAM COSABA
C
C CHARACTER*8 NTYPE, LTYPE, NTITLE, NOCASE, NCARD, ELCARD, NAME, IELSET,
+ NINE, IPROP, INCB, OUTCARD, TLZ, EIGHT
C
C INTEGER ELINC, DATINC
C
C DIMENSION NTYPE(14), NCARD(3, 10), ELCARD(2000, 22),
+ OUTCARD(2000, 22), IELSET(2000), NOCASE(36), IPROP(42), N(42)
C
C DATA NTYPE(1)/'GRID' '//, NTYPE(2)/'CQUAD2' '//,
+ NTYPE(3)/'CSHELL1' '//, NTYPE(4)/'CIHEX1' '//,
+ NTYPE(5)/'CIHEX2' '//, NTYPE(6)/'ENDDATA' '//,
+ NTYPE(7)/'CQUAD4' '//, NTYPE(8)/'CQUADB' '//, NTITLE/'$' '//,
+ NTYPE(9)/'CHEXA' '//, NINE/'9' '//, EIGHT/'8' '//,
+ NTYPE(10)/'CBAR' '//, NTYPE(11)/'RSPLINE' '//,
+ NTYPE(12)/'CWEDGE' '//, NTYPE(13)/'CPENTA' '//, TLZ/'INITLIZE'//
C
C OPEN(UNIT=4, STATUS='NEW', CARriageCONTROL='LIST')
C
C *****
C * SOME INITIALIZATIONS *
C *****
C
C DO 1 I=1, 42
C N(I)=0
C IPROP(I)=TLZ
C 1 CONTINUE
C DO 2 I=1, 2000
C DO 3 J=1, 22
C ELCARD(I, J)=TLZ
C OUTCARD(I, J)=TLZ
C 3 CONTINUE
C 2 CONTINUE
C
C
C *****
C *
C * NOTES.
C *
C * 1. CURRENTLY LIMITED TO 2000 ELEMENTS--CHANGE DIMENSION
C * STATEMENT IF NECESSARY
C *
C * 2. TRANSLATE NASTRAN BDF OUTPUT FROM EITHER PATNAS.EXE OR
C * PATCOS.EXE
C *
C * *PATCOS DOES NOT SUPPORT ANY 8-NODE QUADS, 3-NODE BEAMS
C * OR 15-NODE WEDGES: USE PATNAS
C *
C * *IF PATNAS IS USED TO PRODUCE 20-NODE 3D ELEMENTS (OR
C * 15-NODE WEDGE ELEMENTS), THE ELEMENTS MUST BE FLAGGED
C * WITH AN "B" IN TH PROPERTY ID COLUMN (USE PFE0 IN PATRAN)
C *
C * 3. INPUT.DAT FILE MUST EXIST FOR EVERY TRANSLATION. USE THE

```

## FOLLOWING FORMAT:

```

123456789***** C (COLUMNS)
n (an integer, IELMNT)
CPE4 (eg )(ABAQUS ELEMENT NAME)
m
CPE8
*
* (etc.)

```

## WHERE :

```

IELMNT = 1 IF 4-NODE QUADS ARE TO BE TRANSLATED
        = 2 IF 8-NODE QUADS ARE TO BE TRANSLATED
        = 3 IF 8-NODE 3D ELEMENTS ARE TO BE TRANSLATED
        = 4 IF 20-NODE 3D ELEMENTS ARE TO BE TRANSLATED
        = 5 IF 2-NODE BEAM ELEMENTS ARE TO BE TRANSLATED
        = 6 IF 3-NODE BEAM ELEMENTS ARE TO BE TRANSLATED
        = 7 IF 6-NODE WEDGE ELEMENTS ARE TO BE TRANSLATED
        = 8 IF 15-NODE WEDGE ELEMENTS ARE TO BE TRANSLATED

```

EACH PAIR OF CARDS (IELMNT,name) IN INPUT DAT MUST CORRESPOND TO A PROPERTY ID IN THE NASTRAN BDF FILE. IN THE ORDER IN WHICH THE PROPERTY ID'S FIRST APPEAR. THIS CODE REARRANGES THE ELEMENTS TO BE GROUPED BY PROPERTY ID, RESULTING IN A DIFFERENT \*ELEMENT,ELSET= CARD FOR EACH SET OF ELEMENTS.

- 4 INTERFACE ELEMENTS MUST BE FLAGGED WITH A "9" IN THE PROPERTY ID COLUMN (USE PFEG IN PATRAN). IN PATRAN, INTERFACE ELEMENTS ARE CREATED AS THEIR CORRESPONDING "REAL" ELEMENTS (eg. A 6-NODE 2D INTERFACE ELEMENT IS CREATED AS AN 8-NODE QUAD) THIS TRANSLATOR TAKES CARE OF SORTING OUT CONNECTIVITY WITHIN EACH ELEMENT.

```

ELINC=1
READ(3,1019) (NOCASE(M),M=13,24)
READ(3,1019) (NOCASE(M),M=1,12)
IF(NOCASE(1).EQ.NTITLE) GO TO 4
GO TO 34

```

```

*****
* CREATE HEADING CARD *
*****

```

```

4 WRITE(4,2001)
WRITE(4,2003) (NOCASE(M),M=2,12)

```

```

*****
* CREATE NODE CARD *
*****

```

```

WRITE(4,3001)

```

```

*****
* DETERMINE NODAL COORDINATES AND ELEMENT CARD TYPE *
*****

```

```

READ(3,1019) (NOCASE(M),M=25,36)
B DATINC=1

```

```

      READ(3,1003) (NCARD(1,J),J=1,10)
      IF(NCARD(1,1).EQ.NTYPE(1)) GO TO 160
      IELSET(ELINC)=NCARD(1,3)
      DO 10 K=1,14
      IF(NCARD(1,1).EQ.NTYPE(K)) GO TO (160,13,70,100,200,31,13,
+70,100,40,50,80,80) K
10  CONTINUE
      GO TO 33
C
C *****
C * TRANSLATE QUADRILATERAL ELEMENT DATA TO ABAQUS FORMAT *
C *****
C
      13 IF (NCARD(1,3).EQ.NINE) GO TO 15
      ELCARD(ELINC,DATINC)=NCARD(1,2)
      DATINC=DATINC+1
      DO 14 J=4,7
      ELCARD(ELINC,DATINC)=NCARD(1,J)
      DATINC=DATINC+1
      14 CONTINUE
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE 4-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT *
C *****
C
      15 ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,5)
      ELCARD(ELINC,4)=NCARD(1,7)
      ELCARD(ELINC,5)=NCARD(1,6)
      ELINC=ELINC+1
      GO TO 9
C
C *****
C * TRANSLATE 2-NODE BEAM ELEMENTS TO ABAQUS FORMAT *
C *****
C
      40 ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,5)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE 3-NODE BEAM ELEMENTS TO ABAQUS FORMAT *
C *****
C
      50 ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,5)
      ELCARD(ELINC,4)=NCARD(1,7)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE NASTRAN 8 NODE--2D ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
C
      70 READ(3,1003) (NCARD(2,J),J=1,10)
      IF(NCARD(1,3).EQ.NINE) GO TO 75

```

```

      ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,5)
      ELCARD(ELINC,4)=NCARD(1,6)
      ELCARD(ELINC,5)=NCARD(1,7)
      ELCARD(ELINC,6)=NCARD(1,8)
      ELCARD(ELINC,7)=NCARD(1,9)
      ELCARD(ELINC,8)=NCARD(2,2)
      ELCARD(ELINC,9)=NCARD(2,3)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE 6-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
C
      75 ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,8)
      ELCARD(ELINC,4)=NCARD(1,5)
      ELCARD(ELINC,5)=NCARD(1,7)
      ELCARD(ELINC,6)=NCARD(2,2)
      ELCARD(ELINC,7)=NCARD(1,6)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE 6-NODE WEDGE ELEMENTS TO ABAQUS FORMAT *
C *****
C
      80 IF(NCARD(1,3).EQ.EIGHT) GO TO 350
      ELCARD(ELINC,1)=NCARD(1,2)
      ELCARD(ELINC,2)=NCARD(1,4)
      ELCARD(ELINC,3)=NCARD(1,5)
      ELCARD(ELINC,4)=NCARD(1,6)
      ELCARD(ELINC,5)=NCARD(1,4)
      ELCARD(ELINC,6)=NCARD(1,7)
      ELCARD(ELINC,7)=NCARD(1,8)
      ELCARD(ELINC,8)=NCARD(1,9)
      ELCARD(ELINC,9)=NCARD(1,7)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE NASTRAN 8 NODE--3D ELEMENTS TO ABAQUS FORMAT *
C *****
C
      100 IF(NCARD(1,3).EQ.EIGHT) GO TO 300
      READ(3,1003) (NCARD(2,J),J=1,10)
      IF(NCARD(1,3).EQ.NINE) GO TO 105
      ELCARD(ELINC,1)=NCARD(1,2)
      DO 101 K=2,7
      ELCARD(ELINC,K)=NCARD(1,K+2)
      101 CONTINUE
      ELCARD(ELINC,8)=NCARD(2,2)
      ELCARD(ELINC,9)=NCARD(2,3)
      ELINC=ELINC+1
      GO TO 8
C
C *****
C * TRANSLATE 3-D 8-NODE INTERFACE ELEMENT DATA TO ABAQUS FORMAT *
C *****

```

```

C
105 ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,8)
    ELCARD(ELINC,4)=NCARD(1,9)
    ELCARD(ELINC,5)=NCARD(1,5)
    ELCARD(ELINC,6)=NCARD(1,7)
    ELCARD(ELINC,7)=NCARD(2,3)
    ELCARD(ELINC,8)=NCARD(2,2)
    ELCARD(ELINC,9)=NCARD(1,6)
    ELINC=ELINC+1
    GO TO 8

*****
* TRANSLATE 20 NODE ELEMENT DATA TO ABAQUS FORMAT (PATCOS) *
*****

200 DO 201 K=2,3
    READ(3,1003) (NCARD(K,J),J=1,10)
201 CONTINUE
    IF(NCARD(1,3).EQ.NINE) GO TO 205
    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,6)
    ELCARD(ELINC,4)=NCARD(1,8)
    ELCARD(ELINC,5)=NCARD(2,2)
    ELCARD(ELINC,6)=NCARD(2,8)
    ELCARD(ELINC,7)=NCARD(3,2)
    ELCARD(ELINC,8)=NCARD(3,4)
    ELCARD(ELINC,9)=NCARD(3,6)
    ELCARD(ELINC,10)=NCARD(1,5)
    ELCARD(ELINC,11)=NCARD(1,7)
    ELCARD(ELINC,12)=NCARD(1,9)
    ELCARD(ELINC,13)=NCARD(2,3)
    ELCARD(ELINC,14)=NCARD(2,9)
    ELCARD(ELINC,15)=NCARD(3,3)
    ELCARD(ELINC,16)=NCARD(3,5)
    ELCARD(ELINC,17)=NCARD(3,7)
    ELCARD(ELINC,18)=NCARD(2,4)
    ELCARD(ELINC,19)=NCARD(2,5)
    ELCARD(ELINC,20)=NCARD(2,6)
    ELCARD(ELINC,21)=NCARD(2,7)
    ELINC=ELINC+1
    GO TO 8

*****
* TRANSLATE 16-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATCOS) *
*****

205 ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(2,8)
    ELCARD(ELINC,4)=NCARD(3,2)
    ELCARD(ELINC,5)=NCARD(1,6)
    ELCARD(ELINC,6)=NCARD(2,4)
    ELCARD(ELINC,7)=NCARD(2,9)
    ELCARD(ELINC,8)=NCARD(2,5)
    ELCARD(ELINC,9)=NCARD(1,5)
    ELCARD(ELINC,10)=NCARD(2,2)
    ELCARD(ELINC,11)=NCARD(3,6)
    ELCARD(ELINC,12)=NCARD(3,4)
    ELCARD(ELINC,13)=NCARD(1,8)

```



```

ELCARD(ELINC,14)=NCARD(2,7)
ELCARD(ELINC,15)=NCARD(3,5)
ELCARD(ELINC,16)=NCARD(2,6)
ELCARD(ELINC,17)=NCARD(1,9)
ELINC=ELINC+1
GO TO 8

```

```

*****
* TRANSLATE 20 NODE ELEMENT DATA TO ABAQUS FORMAT (PATNAS) *
*****

```

```

300 DO 301 K=2,3
  READ(3,1003) (NCARD(K,J),J=1,10)
301 CONTINUE
  IF(NCARD(1,3).EQ.NINE) GO TO 305
  ELCARD(ELINC,1)=NCARD(1,2)
  ELCARD(ELINC,2)=NCARD(1,4)
  ELCARD(ELINC,3)=NCARD(1,5)
  ELCARD(ELINC,4)=NCARD(1,6)
  ELCARD(ELINC,5)=NCARD(1,7)
  ELCARD(ELINC,6)=NCARD(1,8)
  ELCARD(ELINC,7)=NCARD(1,9)
  ELCARD(ELINC,8)=NCARD(2,2)
  ELCARD(ELINC,9)=NCARD(2,3)
  ELCARD(ELINC,10)=NCARD(2,4)
  ELCARD(ELINC,11)=NCARD(2,5)
  ELCARD(ELINC,12)=NCARD(2,6)
  ELCARD(ELINC,13)=NCARD(2,7)
  ELCARD(ELINC,14)=NCARD(3,4)
  ELCARD(ELINC,15)=NCARD(3,5)
  ELCARD(ELINC,16)=NCARD(3,6)
  ELCARD(ELINC,17)=NCARD(3,7)
  ELCARD(ELINC,18)=NCARD(2,8)
  ELCARD(ELINC,19)=NCARD(2,9)
  ELCARD(ELINC,20)=NCARD(3,2)
  ELCARD(ELINC,21)=NCARD(3,3)
  ELINC=ELINC+1
GO TO 8

```

```

*****
* TRANSLATE 16-NODE INTERFACE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
*****

```

```

305 ELCARD(ELINC,1)=NCARD(1,2)
  ELCARD(ELINC,2)=NCARD(1,4)
  ELCARD(ELINC,3)=NCARD(1,8)
  ELCARD(ELINC,4)=NCARD(1,9)
  ELCARD(ELINC,5)=NCARD(1,5)
  ELCARD(ELINC,6)=NCARD(2,8)
  ELCARD(ELINC,7)=NCARD(3,4)
  ELCARD(ELINC,8)=NCARD(2,9)
  ELCARD(ELINC,9)=NCARD(2,4)
  ELCARD(ELINC,10)=NCARD(1,7)
  ELCARD(ELINC,11)=NCARD(2,3)
  ELCARD(ELINC,12)=NCARD(2,2)
  ELCARD(ELINC,13)=NCARD(1,6)
  ELCARD(ELINC,14)=NCARD(3,3)
  ELCARD(ELINC,15)=NCARD(3,6)
  ELCARD(ELINC,16)=NCARD(3,2)
  ELCARD(ELINC,17)=NCARD(2,6)
  ELINC=ELINC+1
GO TO 8

```

```

C *****
C * TRANSLATE 15-NODE WEDGE ELEMENTS TO ABAQUS FORMAT (PATNAS) *
C *****
C
350 DO 351 K=2,3
    READ(3,1003) (NCARD(K,J),J=1,10)
351 CONTINUE
    ELCARD(ELINC,1)=NCARD(1,2)
    ELCARD(ELINC,2)=NCARD(1,4)
    ELCARD(ELINC,3)=NCARD(1,5)
    ELCARD(ELINC,4)=NCARD(1,6)
    ELCARD(ELINC,5)=NCARD(1,4)
    ELCARD(ELINC,6)=NCARD(1,7)
    ELCARD(ELINC,7)=NCARD(1,8)
    ELCARD(ELINC,8)=NCARD(1,9)
    ELCARD(ELINC,9)=NCARD(1,7)
    ELCARD(ELINC,10)=NCARD(2,2)
    ELCARD(ELINC,11)=NCARD(2,3)
    ELCARD(ELINC,12)=NCARD(2,4)
    ELCARD(ELINC,13)=NCARD(2,4)
    ELCARD(ELINC,14)=NCARD(2,5)
    ELCARD(ELINC,15)=NCARD(2,6)
    ELCARD(ELINC,16)=NCARD(2,7)
    ELCARD(ELINC,17)=NCARD(2,5)
    ELCARD(ELINC,18)=NCARD(2,8)
    ELCARD(ELINC,19)=NCARD(2,9)
    ELCARD(ELINC,20)=NCARD(3,2)
    ELCARD(ELINC,21)=NCARD(3,2)
    ELINC=ELINC+1
    GO TO 8
C
C *****
C * TRANSLATE GRID POINT CARDS TO ABAQUS FORMAT *
C *****
C
160 WRITE(4,1011) NCARD(1,2), (NCARD(1,J),J=4,6)
    GO TO 8
C
C *****
C * REARRANGE ELEMENT CARDS TO BE GROUPED BY PID *
C *****
C
31 NUMEL=ELINC-1
    IPID=1
C
C *****
C * COUNT THE ELSETS *
C *****
C
    DO 520 INC=1,NUMEL
        IF(INC.EQ.1) GO TO 515
        DO 510 II=1,IPID
            IF(IELSET(INC).NE. IPROP(II)) GO TO 510
            N(II)=N(II)+1
            GO TO 520
        510 CONTINUE
        515 N(IPID)=1
            IPROP(IPID)=IELSET(INC)
            IPID=IPID+1
        520 CONTINUE
C

```

```

C *****
C * REARRANGE THE CARDS *
C *****
C
    LOOP2=IPID-1
    ICARD=1
    DO 560 INC2=1, LOOP2
    DO 540 INC3=1, NUMEL
    IF(IELSET(INC3).EQ. IPROP(INC2)) GO TO 530
    GO TO 540
530 DO 535 INC4=1, 22
    OUTCARD(ICARD, INC4)=ELCARD(INC3, INC4)
535 CONTINUE
    ICARD=ICARD+1
540 CONTINUE
560 CONTINUE

C *****
C * CREATE ELEMENT CARD AND WRITE CONNECTIVITIES *
C *****
C
    III=1
    INC6=1
    INC7=N(1)
    INCB=IPROP(1)
    READ(8, 1000) IELMNT
    READ(8, 1001) LTYPE
    WRITE(4, 1017) LTYPE, INCB
600 DO 700 INC5=INC6, INC7
    IF(IELMNT EQ. 1) GO TO 730
    IF(IELMNT EQ. 3) GO TO 720
    IF(IELMNT EQ. 4) GO TO 710
    IF(IELMNT EQ. 2) GO TO 720
    IF(IELMNT EQ. 5) GO TO 740
    IF(IELMNT EQ. 6) GO TO 750
    IF(IELMNT EQ. 7) GO TO 720
    IF(IELMNT EQ. 8) GO TO 710
    GO TO 30
720 IF((INCB EQ. NINE).AND. (IELMNT EQ. 2)) GO TO 725
    WRITE(4, 1009) (OUTCARD(INC5, J), J=1, 9)
    GO TO 700
725 WRITE(4, 1008) (OUTCARD(INC5, J), J=1, 7)
    GO TO 700
710 IF(INCB EQ. NINE) GO TO 715
    WRITE(4, 1010) (OUTCARD(INC5, J)(5:8), J=1, 21)
    GO TO 700
715 WRITE(4, 1006) (OUTCARD(INC5, J)(5:8), J=1, 17)
    GO TO 700
740 WRITE(4, 1004) (OUTCARD(INC5, J), J=1, 3)
    GO TO 700
750 WRITE(4, 1005) (OUTCARD(INC5, J), J=1, 4)
    GO TO 700
730 WRITE(4, 1007) (OUTCARD(INC5, J), J=1, 5)
700 CONTINUE
    III=III+1
    IF(N(III).EQ. 0) GO TO 32
    READ(8, 1000) IELMNT
    READ(8, 1001) LTYPE
    INCB=IPROP(III)
    WRITE(4, 1017) LTYPE, INCB
    INC6=INC7+1
    INC7=INC7+N(III)

```

```
      GO TO 600
33 WRITE(4,1018)
      GO TO 32
34 WRITE(4,1014)
      GO TO 32
29 WRITE(4,1013)
      GO TO 32
30 WRITE(4,1012)
32 STOP
1000 FORMAT(I1)
1001 FORMAT(AB)
1003 FORMAT(10AB)
1004 FORMAT(2(AB,' '),AB)
1005 FORMAT(3(AB,' '),AB)
1006 FORMAT(16(A4,' ')/A4)
1007 FORMAT(4(AB,' '),AB)
1008 FORMAT(6(AB,' '),AB)
1009 FORMAT(8(AB,' '),AB)
1010 FORMAT(16(A4,' ')/5X,4(A4,' '),A4)
1011 FORMAT(3(AB,' '),AB)
1012 FORMAT(10X,'ERROR IN ELEMENT TYPE NAME USED AS INPUT')
1013 FORMAT(10X,'ERROR IN SPECIFICATION OF INPUT PARAMETERS')
1014 FORMAT(10X,'ERROR IN FIRST 3 CARDS OF NASTRAN INPUT DECK')
1015 FORMAT(10X,'ERROR DUE TO LATEST MODIFICATIONS')
1017 FORMAT(15H*ELEMENT, TYPE=,AB,' ',ELSET= PID',AB)
1018 FORMAT(10X,'ERROR: UNSUPPORTED NASTRAN ELEMENT TYPE')
1019 FORMAT(A1,9AB,A3,A4)
2001 FORMAT(5H*HEADING)
2003 FORMAT(9AB,A3,A4)
3001 FORMAT(5H*NODE)
      END
```

APPENDIX C

MATERIAL PROPERTIES OF COLUMBIUM C-103

Modulus of Elasticity lb/in <sup>2</sup>	Poisson's Ratio	Temperature °F	ABAQUS	INPUT
*ELASTIC				
15.0 x 10 <sup>6</sup>	0.33	70.0	15000000.0, 0.33,	70.0
13.4 x 10 <sup>6</sup>	0.33	392.0	13400000.0, 0.33,	392.0
12.9 x 10 <sup>6</sup>	0.33	752.0	12900000.0, 0.33,	752.0
12.4 x 10 <sup>6</sup>	0.33	1112.0	12400000.0, 0.33,	1112.0
11.9 x 10 <sup>6</sup>	0.33	1472.0	11900000.0, 0.33,	1472.0
11.5 x 10 <sup>6</sup>	0.33	1832.0	11500000.0, 0.33,	1832.0
11.0 x 10 <sup>6</sup>	0.33	2192.0	11000000.0, 0.33,	2192.0
10.5 x 10 <sup>6</sup>	0.33	2552.0	10500000.0, 0.33,	2552.0
9.0 x 10 <sup>6</sup>	0.33	2912.0	9000000.0, 0.33,	2912.0

Thermal Conductivity Btu/in sec °F	Temperature °F	ABAQUS	INPUT
*CONDUCTIVITY			
6.01 x 10 <sup>-4</sup>	0.0	0.000601,	0.0
6.48 x 10 <sup>-4</sup>	500.0	0.000648,	500.0
7.17 x 10 <sup>-4</sup>	1000.0	0.000717,	1000.0
7.41 x 10 <sup>-4</sup>	1500.0	0.000741,	1500.0
8.10 x 10 <sup>-4</sup>	2000.0	0.000810,	2000.0
8.79 x 10 <sup>-4</sup>	2500.0	0.000879,	2500.0
9.26 x 10 <sup>-4</sup>	3000.0	0.000926,	3000.0

Density lb/in <sup>3</sup>	ABAQUS	INPUT
0.31	*DENSITY 0.31	

SPECIFIC HEAT Btu/lbm °F	TEMPERATURE °F	ABAQUS	INPUT
0.075	1000.0	*SPECIFIC HEAT 0.075, 1000.0	

Thermal Expansion Coefficient	Temperature °F	ABAQUS	INPUT
		*EXPANSION, ZERO = 70.0	
0.0 x 10 <sup>-6</sup>	70.0	0.0, 70.0	
3.5 x 10 <sup>-6</sup>	500.0	0.0000035, 500.0	
3.8 x 10 <sup>-6</sup>	1000.0	0.0000038, 1000.0	
4.1 x 10 <sup>-6</sup>	1500.0	0.0000041, 1500.0	
4.2 x 10 <sup>-6</sup>	2000.0	0.0000042, 2000.0	
4.4 x 10 <sup>-6</sup>	2500.0	0.0000044, 2500.0	
4.6 x 10 <sup>-6</sup>	3000.0	0.0000046, 3000.0	
4.8 x 10 <sup>-6</sup>	3500.0	0.0000048, 3500.0	
Yield Strength lb/in <sup>2</sup>	Plastic Strain in/in	Temperature °F	ABAQUS INPUT
			*PLASTIC
40,000.0	0.0	70.0	40000.0, 0.0, . 70.0
50,000.0	0.0066	70.0	50000.0, 0.0066, 70.0
21,000.0	0.0	1832.0	21000.0, 0.0, 1832.0
26,000.0	0.0045	1832.0	26000.0, 0.0045, 1832.0

APPENDIX D

USER SUBROUTINE FILM AND FILMTEST FILES



```

SUBROUTINE FILM(H,SINK,TEMP,KSTEP,KINC,TIME,NOEL,NPT,COORDS,
+              JLTYP)
IMPLICIT REAL*8(A-H,O-Z)
DIMENSION COORDS(3),COND(3),AREA(13),PRESSFS(13)
INTEGER FSUR1(28),HOL1(24),FSUR2(12),HOL2(24),HOL3(12),
+       HOL4(12),HOL5(12),HOL6(12),HOL7(12),RSUR1(32),
+       FLNG1(4),FLNG2(4),RSUR2(4)

```

AREA IS IN FEET SQUARED  
PRESSURE IS IN POUNDS PER SQUARE INCH

```
DATA AREA /0.150330, 0.002749, 0.002749, 0.001154, 0.001192,
+      0.001270, 0.001351, 0.001447, 0.001561, 0.041097,
+      0.001620, 0.041097, 0.057610/
DATA PRESSFS /22000 0, 21500 0, 21500 0, 21500 0, 21000 0,
+      21000 0, 21000 0, 20500 0, 20500 0, 20000 0,
+      20500 0, 20000 0, 20000 0/
```

THESE ARRAYS CONSIST OF ALL THE ELEMENTS IN THE PARTICULAR  
ELEMENT SET NAME

```

DATA FSUR1 / 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25, 26,
+ 27, 28, 33, 34, 35, 36, 41, 42, 43, 44, 47, 48,
+ 53, 54, 55, 56/
DATA HOL1 / 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
+ 21, 23, 25, 27, 29, 30, 33, 34, 37, 38, 41, 42/
DATA FSUR2 /59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100/
DATA HOL2 /57, 58, 59, 60, 69, 70, 71, 72, 73, 74, 75, 76,
+ 77, 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100/
DATA HOL3 /141, 142, 159, 160, 165, 166, 171, 172, 177, 178,
+ 201, 202/
DATA HOL4 /139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+ 199, 200/
DATA HOL5 /137, 138, 155, 156, 161, 162, 167, 168, 173, 174,
+ 197, 198/
DATA HOL6 /259, 260, 271, 272, 275, 276, 279, 280, 283, 284,
+ 291, 292/
DATA HOL7 /257, 258, 269, 270, 273, 274, 277, 278, 281, 282,
+ 289, 290/
DATA RSUR1 /257, 258, 261, 262, 263, 264, 269, 270, 273, 274,
+ 277, 278, 281, 282, 285, 286, 289, 290, 293, 294,
+ 295, 296, 301, 302, 303, 304, 309, 310, 311, 312,
+ 317, 318/
DATA FLNG1 /323, 324, 327, 328/
DATA FLNG2 /321, 322, 325, 326/
DATA RSUR2 /321, 322, 325, 326/

```

**SINK TEMPERATURE DEFINITION**  
**THESE ARE DEGREE FAHRENHEIT**

```
IF (TIME.EQ.0.0) SINK = 70.0
IF (TIME.LT.0.5) SINK = 6000.0 * TIME
IF (TIME.GE.0.5 AND TIME.LE.1.3) SINK = 3000.0
IF (TIME.GT.1.3 AND TIME.LT.1.8) SINK = -5400.0 * TIME + 10020.0
IF (TIME.GE.1.8) SINK = 300.0
```

CONSTANTS USED IN CALCULATIONS  
MDOT IS IN POUND MASS PER SEC  
PRANDTL NUMBER IS DIMENSIONLESS  
SPECIFIC HEAT AT CONSTANT PRESSURE IS IN BTU PER POUND DEGREE RANKINE

MDOT = 128.3668

PR = 0.74  
CP = 0.295

C  
C  
C  
C  
C

LOGIC TO DETERMINE WHICH EQUATION TO USE

DIAMETERS AND WETTED AREA DIAMETERS ARE IN INCHES

```

DO 10 II = 1,28
  IF(NOEL.EQ.FSUR1(II).AND.JLTYP.EQ.12)THEN
    NEG = 1
    LOC = 1
    DIAM = 5.25
    WETD = 4.9024
    GO TO 60
  ENDIF
10 CONTINUE
DO 20 IJ = 1,24
  IF(NOEL.EQ.HOL1(IJ).AND.JLTYP.EQ.13)THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL1(IJ).AND.JLTYP.EQ.14)THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL1(IJ).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL2(IJ).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 4
    DIAM = 0.46
    GO TO 60
  ENDIF
20 CONTINUE
DO 30 IK = 1,12
  IF(NOEL.EQ.FSUR2(IK).AND.JLTYP.EQ.12)THEN
    NEG = 3
    LOC = 3
    DIAM = 0.71
    WETD = 0.5408
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL3(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 5
    DIAM = 0.468
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL4(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 6
    DIAM = 0.482
    GO TO 60
  ENDIF

```

```

      IF (NOEL.EQ.HOL5(IK).AND.JLTYP.EQ.16) THEN
        NEG = 2
        LOC = 7
        DIAM = 0.498
        GO TO 60
      ENDIF
      IF (NOEL.EQ.HOL6(IK).AND.JLTYP.EQ.16) THEN
        NEG = 2
        LOC = 8
        DIAM = 0.515
        GO TO 60
      ENDIF
      IF (NOEL.EQ.HOL7(IK).AND.JLTYP.EQ.16) THEN
        NEG = 2
        LOC = 9
        DIAM = 0.535
        GO TO 60
      ENDIF
30  CONTINUE
      DO 40 IL = 1,32
        IF (NOEL.EQ.RSUR1(IL).AND.JLTYP.EQ.11) THEN
          NEG = 4
          LOC = 10
          WETD = 2.3358
          GO TO 60
        ENDIF
40  CONTINUE
      DO 50 IM = 1,4
        IF (NOEL.EQ.FLNG1(IM).AND.JLTYP.EQ.16) THEN
          NEG = 5
          LOC = 11
          DIAM = 0.545
          WETD = 2.3358
          GO TO 60
        ENDIF
        IF (NOEL.EQ.FLNG2(IM).AND.JLTYP.EQ.16) THEN
          NEG = 5
          LOC = 12
          DIAM = 2.745
          WETD = 2.3358
          GO TO 60
        ENDIF
        IF (NOEL.EQ.RSUR2(IM).AND.JLTYP.EQ.11) THEN
          NEG = 4
          LOC = 13
          WETD = 1.7400
          GO TO 60
        ENDIF
50  CONTINUE
C
C    FREE STREAM VELOCITY CALCULATION
C
60  COND(1) = PRESSFS(LOC)
    COND(2) = SINK + 460.0
    CALL FINTERP(3,2,COND,RHOF5)
C
C    FREE STREAM VELOCITY IS IN INCHES PER SECOND
C
    VELFS = (MDOT / (RHOF5 * AREA(LOC))) * 12.0
C
C    GAS PROPERTY DEFINITION FOR FILM TEMPERATURE
C

```

```

      TFILM = 0.5 * (SINK + TEMP)
      COND(2) = TFILM + 460.0
      CALL FINTERP(1,2,COND,VISFS)
      CALL FINTERP(2,2,COND,CONDFS)
      CALL FINTERP(3,2,COND,DENFS)

C
C      RETURNED VALUES ARE AS FOLLOWS:
C      DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
C      THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE RANKINE)
C      DENSITY (POUND PER CUBIC FOOT)
C
      VISFS = VISFS / (3600.0 * 12.0)
      CONDFS = CONDFS / (3600.0 * 12.0)
      DENFS = DENFS / 1728.0

C
C      HEAT TRANSFER COEFFICIENT H CALCUALTION
C
      THESE ARE IN BTU PER SQUARE INCH SECOND DEGREE RANKINE

      GO TO (70,80,90,100,110), NEG

C
C      NEG = 1 --- FRONT SURFACE ONLY --- FSUR1 ELEMENTS
C
      70 H = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM))**.5) * ((VELFS*
+      WETD*DENFS/VISFS)**.731) * (PR**(1.0/3.0))
      GO TO 120

C
C      NEG = 2 --- NOZZLE ONLY --- HOL1, HOL2, HOL3, HOL4, HOL5,
C      HOL6, AND HOL7 ELEMENTS
C
      80 H = 0.026 * (CP/DIAM**.2) * (VISFS**.2/PR**.6) * ((DENFS*
+      VELFS)**.8)
      GO TO 120

C
C      NEG = 3 --- FRONT SURFACE AND NOZZLE COMBINED --- FSUR2 ELEMENTS
C
      90 HFSUR = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM))**.5) *
+      ((VELFS*WETD*DENFS/VISFS)**.731) * (PR**(1.0/3.0))
      HHOL = 0.026 * (CP/DIAM**.2) * (VISFS**.2/PR**.6) *
+      ((DENFS*VELFS)**.8)
      H = 0.5 * (HFSUR + HHOL)
      GO TO 120

C
C      NEG = 4 --- BACK SURFACE ONLY --- RSUR1 AND RSUR2 ELEMENTS
C
      100 H = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)**
+      (2.0/3.0)) * (PR**(1.0/3.0))
      GO TO 120

C
C      NEG = 5 --- BACK SURFACE AND NOZZLE COMBINED --- FLNG1 AND FLNG2
C      ELEMENTS
C
      110 HHOL = 0.026 * (CP/DIAM**.2) * (VISFS**.2/PR**.6) *
+      ((DENFS*VELFS)**.8)
      HRSUR = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)
+      **(2.0/3.0)) * (PR**(1.0/3.0))
      H = 0.5 * (HHOL+HRSUR)

C
C      END OF SUBROUTINE FILM
C
      120 RETURN
      END

```

```

SUBROUTINE FINTERP(ITAB,NUM,U,A)
IMPLICIT REAL*8(A-H,O-Z)
DIMENSION U(3),N(3),INDEX(3),FAC(3),T(137),ISEQ(3)

```

```

TABLE T DATA

```

```

IN ORDER THESE ARE:

```

- 1) DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
- 2) THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE RANKINE)
- 3) DENSITY (POUND PER CUBIC FOOT)

```

ALL ARE A FUNCTION OF PRESSURE (PSI) AND TEMPERATURE (DEGREE R).

```

```

DATA T /3.0, 7.0, 14.6959, 14695.9, 29391.8, 750.0, 1000.0,
+ 1500.0, 2000.0, 2500.0, 3000.0, 3500.0, 0.053, 0.0635,
+ 0.084, 0.104, 0.119, 0.133, 0.147, 0.099, 0.118,
+ 0.125, 0.14, 0.153, 0.165, 0.176, 0.18, 0.18,
+ 0.1825, 0.186, 0.191, 0.2, 0.21, 3.0, 7.0,
+ 14.6959, 14695.9, 29391.8, 750.0, 1000.0, 1500.0, 2000.0,
+ 2500.0, 3000.0, 3500.0, 0.0205, 0.0252, 0.0339, 0.042,
+ 0.0495, 0.0565, 0.064, 0.0435, 0.0475, 0.055, 0.0625,
+ 0.0695, 0.076, 0.082, 0.08, 0.0805, 0.083, 0.086,
+ 0.09, 0.096, 0.102, 6.0, 9.0, 20000.0, 20400.0,
+ 20800.0, 21200.0, 21600.0, 22000.0, 760.0, 835.0, 1210.0,
+ 1585.0, 1960.0, 2335.0, 2710.0, 3085.0, 3460.0, 33.2401,
+ 31.6982, 25.9477, 21.9185, 18.7722, 16.4698, 14.6965, 13.2777,
+ 12.1128, 33.5083, 31.9658, 26.2139, 22.2011, 19.0428, 16.7145,
+ 14.9216, 13.4865, 12.3076, 33.7726, 32.2295, 26.4751, 22.4763,
+ 19.3112, 16.9571, 15.1447, 13.6916, 12.5009, 34.0331, 32.4894,
+ 26.7316, 22.7444, 19.5778, 17.1975, 15.3660, 13.8991, 12.6928,
+ 34.2900, 32.7457, 26.9838, 23.0060, 19.8436, 17.4360, 15.5853,
+ 14.1029, 12.8633, 34.5435, 32.9985, 27.2319, 23.2614, 20.1073,
+ 17.6724, 15.8029, 14.3051, 13.0724/
DATA ISEQ /1, 34, 67/

```

```

THIS IS THE END OF THE DATA TABLES

```

```

F(T1,T2,FF)=T2+FF*(T1-T2)

```

```

PLACE START LOCATION OF THE TABLE INTO K.

```

```

K=ISEQ(ITAB)

```

```

PUT NUMBER OF VALUES OF EACH INDEPENDENT VARIABLE INTO
N-ARRAY

```

```

DO 10 I=1,NUM
  NN=K+I-1
  N(I)=T(NN)

```

```

10 CONTINUE

```

```

FIND INDEX VALUES FOR EACH INDEPENDENT VARIABLE SUCH
THAT DESIRED VALUE LIES BETWEEN INDICES

```

```

INITIALIZE KBEG TO THE START OF THE LIST OF INDEPENDENT
VARIABLES AND KEND TO THE END OF THE LIST OF THE
FIRST INDEPENDENT VARIABLE.

```

```

KBEG=K+NUM
KEND=KBEG+N(1)-1

```

```

C      DO:  FOR THE NUMBER OF INDEPENDENT VARIABLES
C
C          DO 500 J=1, NUM
C              I=N(J)
C
C          IF-THEN-ELSE
C
C          IF  THIS IS THE FIRST INDEPENDENT VARIABLE
C
C              IF (.NOT. (J .EQ. 1)) GO TO 50
C
C          THEN:  DO NOTHING SINCE KBEG AND KEND HAVE
C                  ALREADY BEEN INITIALIZED
C
C              GO TO 60
C
C          ELSE:  INCREMENT KBEG AND KEND
C
C          50  CONTINUE
C              KBEG=KEND+1
C              KEND=KBEG+N(J)-1
C
C          60  CONTINUE
C
C          FI.  END OF IF-THEN-ELSE
C
C          IF-THEN-ELSE
C
C          IF:  THE VALUE WANTED IS LESS THAN OR EQUAL TO
C              THE FIRST VALUE IN THE TABLE.
C
C              IF (.NOT. (U(J) .LE. T(KBEG))) GO TO 65
C
C          THEN:  SET INDEX(J) TO 2 AND GO TO THE ROUTINE
C                  TO COMPUTE THE INTERPOLATION FACTOR
C
C              INDEX(J)=2
C              GO TO 140
C
C          ELSE:
C
C          65  CONTINUE
C
C          IF-THEN-ELSE
C
C          IF:  THE VALUE WANTED IS GREATER THAN OR EQUAL
C              TO THE LAST VALUE OF THE VARIABLE IN THE
C              TABLE
C
C              IF (.NOT. (U(J) .GE. T(KEND))) GO TO 75
C
C          THEN:  SET THE INDEX TO THE NUMBER OF VALUES OF
C                  THE INDEPENDENT VARIABLE AND GO TO THE
C                  ROUTINE TO COMPUTE THE INTERPOLATION FACTOR
C
C              INDEX(J)=N(J)
C              GO TO 140
C
C          ELSE:  COMPUTE THE INDEX VALUES SUCH THAT THE
C                  DESIRED VALUE U(J) LIES BETWEEN THE TABLE
C                  VALUES FOR THOSE COMPUTED INDICES

```

```

75      CONTINUE
      II=1
      KKBEG=KKBEG+1
C
C      DD:  FOR THE NUMBER OF VALUES OF EACH
C      INDEPENDENT VARIABLE
C
C      DO 100 JJ=KKBEG,KEND
C      II=II+1
C
C      IF-THEN-ELSE
C
C      IF:  THE DESIRED VALUE IS LESS THAN OR
C      EQUAL TO THE TABLE VALUE--THE
C      INDEPENDENT VARIABLE VALUE
C
C      IF (.NOT. (U(J) .LE. T(JJ))) GO TO 100
C
C      THEN:  SET THE INDEX TO POINT TO THE TABLE
C      VALUE AND GO TO THE ROUTINE TO
C      COMPUTE THE INTERPOLATION FACTOR
C
C      INDEX(J)=II
C      GO TO 140
C
C      ELSE:  CONTINUE
C
C      FI:  END OF IF-THEN-ELSE
C
100     CONTINUE
C
C      DD:  END OF DO-FOR
C
C      FI:  END OF IF-THEN-ELSE
C
C      FI:  END OF IF-THEN-ELSE
C
C      COMPUTE THE INTERPOLATION FACTOR FAC(J)
C
140     CONTINUE
      IND=KKBEG+INDEX(J)-1
      T1=T(IND)
      T2=T(IND-1)
      FAC(J)=(U(J)-T2)/(T1-T2)
C
C      500  CONTINUE
C
C      DD:  END OF DO-FOR
C
C      *****INTERPOLATION ROUTINE*****
C
C      INITIALIZE KKBEG TO THE BEGINNING OF THE DEPENDENT
C      VARIABLES
C
C      KKBEG=KEND+1
C
C      CASES:  3 CASES (NUM=1,2,3)
C
C      IF (NUM .EQ. 1) GO TO 70
C      IF (NUM .EQ. 2) GO TO 80

```

```

      IF (NUM .EQ. 3) GO TO 90
C
C   PART: (NUM=1)
C
70    CONTINUE
C
C   THERE IS ONLY ONE INDEPENDENT VARIABLE.  COMPUTE
C   THE INTERPOLATED TABLE VALUE A AND RETURN.
C
      I3=INDEX(1)+KBEG-1
      A=F(T(I3),T(I3-1),FAC(1))
      GO TO 95
C
C   PART: (NUM=2)
C
80    CONTINUE
C
C   THERE ARE TWO INDEPENDENT VARIABLES.  THUS AN
C   INTERPOLATION WILL BE BASED ON 4 NUMBERS--TWO FOR
C   EACH VARIABLE.  FIND THE LOCATION OF THE 1ST TWO
C   VALUES BEING INTERPOLATED IN THE T-ARRAY.
C
      I3=INDEX(2)+KBEG-1
      I2=INDEX(1)
      KLOC=(I2-1)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   NOT INTERPOLATE A1,A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA1=F(A1,A2,FAC(2))
C
C   NOW FIND THE LOCATION OF THE 2ND TWO VALUES BEING
C   INTERPOLATED IN THE T-ARRAY
C
      KLOC=(I2-2)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   AGAIN INTERPOLATE A1,A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA2=F(A1,A2,FAC(2))
C
C   NOW INTERPOLATE AA1,AA2 BASED ON THE 1ST INTERPOLATION FACTOR
C
      A=F(AA1,AA2,FAC(1))
      GO TO 95
C
C   PART: (NUM=3)
C
90    CONTINUE
C
C   SINCE THERE ARE THREE INDEPENDENT VARIABLES, THE
C   INTERPOLATION VALUE RETURNED WILL BE BASED ON 8 VALUES
C   FROM THE T-ARRAY.
C
C   FIND THE T-ARRAY LOCATION OF THE 1ST 2 VALUES TO BE
C   INTERPOLATED.
C
      I3=INDEX(3)+KBEG-1
      I2=INDEX(2)
      I1=INDEX(1)

```



```

      KLOC=((I1-1)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA1=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 2ND 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-1)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA2=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 3RD 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-2)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA3=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 4TH 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-2)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA4=F(A1,A2,FAC(3))
C
C   INTERPOLATE AA1,AA2 USING THE 2ND INTERPOLATION FACTOR
C
      A1=F(AA1,AA2,FAC(2))
C
C   INTERPOLATE AA3,AA4 USING THE 2ND INTERPOLATION FACTOR
C
      A2=F(AA3,AA4,FAC(2))
C
C   NOW MAKE THE FINAL INTERPOLATION USING FACTOR ONE.
C
      A=F(A1,A2,FAC(1))
C
95  CONTINUE
      RETURN
      END

```

```

PROGRAM FILMTEST
IMPLICIT REAL*8(A-H,O-Z)
DIMENSION LMNT(192), LFACE(192), COORDS(3)
DATA LMNT/ 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25,
+ 26, 27, 28, 33, 34, 35, 36, 41, 42, 43, 44,
+ 47, 48, 53, 54, 55, 56, 1, 2, 3, 4, 5,
+ 6, 7, 8, 9, 10, 11, 12, 21, 23, 25, 27,
+ 29, 30, 33, 34, 37, 38, 41, 42, 59, 60, 71,
+ 72, 75, 76, 79, 80, 83, 84, 99, 100, 57, 58,
+ 59, 60, 69, 70, 71, 72, 73, 74, 75, 76, 77,
+ 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100,
+ 141, 142, 159, 160, 165, 166, 171, 172, 177, 178, 201,
+ 202, 139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+ 199, 200, 137, 138, 155, 156, 161, 162, 167, 168, 173,
+ 174, 197, 198, 259, 260, 271, 272, 275, 276, 279, 280,
+ 283, 284, 291, 292, 257, 258, 269, 270, 273, 274, 277,
+ 278, 281, 282, 289, 290, 257, 258, 261, 262, 263, 264,
+ 269, 270, 273, 274, 277, 278, 281, 282, 285, 286, 289,
+ 290, 293, 294, 295, 296, 301, 302, 303, 304, 309, 310,
+ 311, 312, 317, 318, 323, 324, 327, 328, 321, 322, 325,
+ 326, 321, 322, 325, 326/
DATA LFACE/28*12, 24*16, 12*12, 24*16, 60*16, 32*11, 8*16, 4*11/
DATA COORDS/1, 0, 3, 0, 2, 0/
OPEN(10, FILE='FILM', FORM='FORMATTED', STATUS='NEW')
NPT = 1
WRITE(10, 100)
100 FORMAT('1'///5X, 'KSTEP', 5X, 'KINC', 5X, 'TIME', 5X, 'NOEL', 5X,
+ 'JLTYP', 7X, 'TEMP', 9X, 'SINK', 11X, 'H'///)
TIME = -0.2
DO 20 I = 1, 11
    KSTEP = I
    TIME = TIME + 0.2
    TEMP = 1000.0 * TIME + 70
    DO 10 J = 1, 192
        KINC = J
        NOEL = LMNT(J)
        JLTYP = LFACE(J)
        CALL FILM(H, SINK, TEMP, KSTEP, KINC, TIME, NOEL, NPT, COORDS,
+ JLTYP)
        WRITE(10, 110) KSTEP, KINC, TIME, NOEL, JLTYP, TEMP, SINK, H
110 FORMAT(/6X, I2, 7X, I3, 6X, F4, 2, 5X, I3, 7X, I2, 7X, F8, 3, 5X,
+ F8, 3, 5X, E9, 3)
    10 CONTINUE
20 CONTINUE
STOP
END

```

```

SUBROUTINE FILM(H, SINK, TEMP, KSTEP, KINC, TIME, NOEL, NPT, COORDS,
+             JLTYP)
  IMPLICIT REAL*8(A-H, O-Z)
  DIMENSION COORDS(3), COND(3), AREA(13), PRESSFS(13)
  INTEGER FSUR1(28), HOL1(24), FSUR2(12), HOL2(24), HOL3(12),
+       HOL4(12), HOL5(12), HOL6(12), HOL7(12), RSUR1(32),
+       FLNG1(4), FLNG2(4), RSUR2(4)

```

```

  AREA IS IN FEET SQUARED
  PRESSURE IS IN POUNDS PER SQUARE INCH

```

```

  DATA AREA /0.150330, 0.002749, 0.002749, 0.001154, 0.001192,
+           0.001270, 0.001351, 0.001447, 0.001561, 0.041097,
+           0.001620, 0.041097, 0.057610/
  DATA PRESSFS /22000.0, 21500.0, 21500.0, 21500.0, 21000.0,
+           21000.0, 21000.0, 20500.0, 20500.0, 20000.0,
+           20500.0, 20000.0, 20000.0/

```

```

  THESE ARRAYS CONSIST OF ALL THE ELEMENTS IN THE PARTICULAR
  ELEMENT SET NAME

```

```

  DATA FSUR1 / 5, 6, 7, 8, 11, 12, 17, 18, 19, 20, 25, 26,
+           27, 28, 33, 34, 35, 36, 41, 42, 43, 44, 47, 48,
+           53, 54, 55, 56/
  DATA HOL1 / 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12,
+           21, 23, 25, 27, 29, 30, 33, 34, 37, 38, 41, 42/
  DATA FSUR2 /59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100/
  DATA HOL2 /57, 58, 59, 60, 69, 70, 71, 72, 73, 74, 75, 76,
+           77, 78, 79, 80, 81, 82, 83, 84, 97, 98, 99, 100/
  DATA HOL3 /141, 142, 159, 160, 165, 166, 171, 172, 177, 178,
+           201, 202/
  DATA HOL4 /139, 140, 157, 158, 163, 164, 169, 170, 175, 176,
+           199, 200/
  DATA HOL5 /137, 138, 155, 156, 161, 162, 167, 168, 173, 174,
+           197, 198/
  DATA HOL6 /259, 260, 271, 272, 275, 276, 279, 280, 283, 284,
+           291, 292/
  DATA HOL7 /257, 258, 269, 270, 273, 274, 277, 278, 281, 282,
+           289, 290/
  DATA RSUR1 /257, 258, 261, 262, 263, 264, 269, 270, 273, 274,
+           277, 278, 281, 282, 285, 286, 289, 290, 293, 294,
+           295, 296, 301, 302, 303, 304, 309, 310, 311, 312,
+           317, 318/
  DATA FLNG1 /323, 324, 327, 328/
  DATA FLNG2 /321, 322, 325, 326/
  DATA RSUR2 /321, 322, 325, 326/

```

```

  SINK TEMPERATURE DEFINITION
  THESE ARE DEGREE FAHRENHEIT

```

```

  IF(TIME.LT.0.5)SINK = 6000.0 * TIME
  IF(TIME.GE.0.5.AND.TIME.LE.1.3)SINK = 3000.0
  IF(TIME.GT.1.3.AND.TIME.LT.1.8)SINK = -3400.0 * TIME + 10020.0
  IF(TIME.GE.1.8)SINK = 300.0

```

```

  CONSTANTS USED IN CALCULATIONS
  MDOT IS IN POUND MASS PER SEC
  PRANDTL NUMBER IS DIMENSIONLESS
  CP IS IN BTU PER POUND DEGREE FAHRENHEIT

```

```

  MDOT = 128.3668
  PR = 0.74

```

```

C      CP = 0.295
C
C      LOGIC TO DETERMINE WHICH EQUATION TO USE
C
DO 10 II = 1,28
  IF(NOEL.EQ.FSUR1(II).AND.JLTYP.EQ.12)THEN
    NEG = 1
    LOC = 1
    DIAM = 5.25
    WETD = 4.9024
    GO TO 60
  ENDIF
10 CONTINUE
DO 20 IJ = 1,24
  IF(NOEL.EQ.HOL1(IJ).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 2
    DIAM = 0.71
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL2(IJ).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 4
    DIAM = 0.46
    GO TO 60
  ENDIF
20 CONTINUE
DO 30 IK = 1,12
  IF(NOEL.EQ.FSUR2(IK).AND.JLTYP.EQ.12)THEN
    NEG = 3
    LOC = 3
    DIAM = 0.71
    WETD = 0.5408
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL3(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 5
    DIAM = 0.468
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL4(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 6
    DIAM = 0.482
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL5(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 7
    DIAM = 0.498
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL6(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 8
    DIAM = 0.515
    GO TO 60
  ENDIF
  IF(NOEL.EQ.HOL7(IK).AND.JLTYP.EQ.16)THEN
    NEG = 2
    LOC = 9

```

```

        DIAM = 0.535
        GO TO 60
    ENDIF
30 CONTINUE
    DO 40 IL = 1,32
        IF (NOEL.EQ. RSUR1(IL).AND. JLTYP.EQ. 11) THEN
            NEG = 4
            LOC = 10
            WETD = 2.3358
            GO TO 60
        ENDIF
40 CONTINUE
    DO 50 IM = 1,4
        IF (NOEL.EQ. FLNG1(IM).AND. JLTYP.EQ. 16) THEN
            NEG = 5
            LOC = 11
            DIAM = 0.545
            WETD = 2.3358
            GO TO 60
        ENDIF
        IF (NOEL.EQ. FLNG2(IM).AND. JLTYP.EQ. 16) THEN
            NEG = 5
            LOC = 12
            DIAM = 2.745
            WETD = 2.3358
            GO TO 60
        ENDIF
        IF (NOEL.EQ. RSUR2(IM).AND. JLTYP.EQ. 11) THEN
            NEG = 4
            LOC = 13
            WETD = 1.7400
            GO TO 60
        ENDIF
50 CONTINUE
C
C   FREE STREAM VELOCITY CALCULATION
C
60 COND(1) = PRESSFS(LOC)
   COND(2) = SINK + 460.0
   CALL FINTERP(3,2,COND,RHOF)
   VELFS = (MDOT / (RHOF * AREA(LOC))) * 12.0
C
C   GAS PROPERTY DEFINITION FOR FILM TEMPERATURE
C
   TFILM = 0.5 * (SINK + TEMP)
   COND(2) = TFILM + 460.0
   CALL FINTERP(1,2,COND,VISFS)
   CALL FINTERP(2,2,COND,CONDFS)
   CALL FINTERP(3,2,COND,DENFS)
   VISFS = VISFS / (3600.0 * 12.0)
   CONDFS = CONDFS / (3600.0 * 12.0)
   DENFS = DENFS / 1728.0
C
C   HEAT TRANSFER COEFFICIENT H CALCULATION
C
   GO TO (70,80,90,100,110), NEG
C
   NEG = 1 --- FRONT SURFACE ONLY --- FSUR1 ELEMENTS
C
70 H = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM)**0.5) * ((VELFS*
+ WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
   GO TO 120

```

```

C
C   NEG = 2 --- NOZZLE ONLY --- HOL1, HOL2, HOL3, HOL4, HOL5,
C   HOL6, AND HOL7 ELEMENTS
C
80 H = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) * ((DENFS*
+   VELFS)**0.8)
GO TO 120

C
C   NEG = 3 --- FRONT SURFACE AND NOZZLE COMBINED --- FSUR2 ELEMENTS
C
90 HFSUR = 0.228 * (CONDFS/WETD) * ((1+(WETD/DIAM))**0.5) *
+   ((VELFS*WETD*DENFS/VISFS)**0.731) * (PR**(1.0/3.0))
HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+   ((DENFS*VELFS)**0.8)
H = 0.5 * (HFSUR + HHOL)
GO TO 120

C
C   NEG = 4 --- BACK SURFACE ONLY --- RSUR1 AND RSUR2 ELEMENTS
C
100 H = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)**
+   (2.0/3.0)) * (PR**(1.0/3.0))
GO TO 120

C
C   NEG = 5 --- BACK SURFACE AND NOZZLE COMBINED --- FLNG1 AND FLNG2
C   ELEMENTS
C
110 HHOL = 0.026 * (CP/DIAM**0.2) * (VISFS**0.2/PR**0.6) *
+   ((DENFS*VELFS)**0.8)
HRSUR = 0.221 * (CONDFS/WETD) * ((VELFS*WETD*DENFS/VISFS)
+   **(2.0/3.0)) * (PR**(1.0/3.0))
H = 0.5 * (HHOL+HRSUR)

C
C   END OF SUBROUTINE FILM
C
120 RETURN
END

```

```

SUBROUTINE FINTERP(ITAB,NUM,U,A)
IMPLICIT REAL*8(A-H,O-Z)
DIMENSION U(3),N(3),INDEX(3),FAC(3),T(137),ISEQ(3)

```

```

TABLE T DATA

```

```

IN ORDER THESE ARE

```

- 1) DYNAMIC VISCOSITY (POUND PER HOUR FOOT)
- 2) THERMAL CONDUCTIVITY (BTU PER FOOT HOUR DEGREE FAHRENHEIT)
- 3) DENSITY (POUND PER CUBIC FOOT)

```

ALL ARE A FUNCTION OF PRESSURE (PSI) AND TEMPERATURE (DEGREE R).

```

```

DATA T /3. 0, 7. 0, 14. 6959, 14695. 9, 29391. 8, 750. 0, 1000. 0,
+ 1500. 0, 2000. 0, 2500. 0, 3000. 0, 3500. 0, 0. 053, 0. 0635,
+ 0. 084, 0. 104, 0. 119, 0. 133, 0. 147, 0. 099, 0. 118,
+ 0. 125, 0. 14, 0. 153, 0. 165, 0. 176, 0. 18, 0. 18,
+ 0. 1825, 0. 186, 0. 191, 0. 2, 0. 21, 3. 0, 7. 0,
+14. 6959, 14695. 9, 29391. 8, 750. 0, 1000. 0, 1500. 0, 2000. 0,
+ 2500. 0, 3000. 0, 3500. 0, 0. 0205, 0. 0252, 0. 0339, 0. 042,
+ 0. 0495, 0. 0565, 0. 064, 0. 0435, 0. 0475, 0. 055, 0. 0625,
+ 0. 0695, 0. 076, 0. 082, 0. 08, 0. 0805, 0. 083, 0. 086,
+ 0. 09, 0. 096, 0. 102, 6. 0, 9. 0, 20000. 0, 20400. 0,
+20800. 0, 21200. 0, 21600. 0, 22000. 0, 760. 0, 835. 0, 1210. 0,
+ 1585. 0, 1960. 0, 2335. 0, 2710. 0, 3085. 0, 3460. 0, 33. 2401,
+31. 6982, 25. 9477, 21. 9185, 18. 7722, 16. 4698, 14. 6965, 13. 2777,
+12. 1128, 33. 5083, 31. 9658, 26. 2139, 22. 2011, 19. 0428, 16. 7145,
+14. 9216, 13. 4865, 12. 3076, 33. 7726, 32. 2295, 26. 4751, 22. 4763,
+19. 3112, 16. 9571, 15. 1447, 13. 6916, 12. 5009, 34. 0331, 32. 4894,
+26. 7316, 22. 7444, 19. 5778, 17. 1975, 15. 3660, 13. 8991, 12. 6928,
+34. 2900, 32. 7457, 26. 9838, 23. 0060, 19. 8436, 17. 4360, 15. 5853,
+14. 1029, 12. 8833, 34. 5435, 32. 9985, 27. 2319, 23. 2614, 20. 1073,
+17. 6724, 15. 8029, 14. 3051, 13. 0724/
DATA ISEQ /1, 34, 67/

```

```

THIS IS THE END OF THE DATA TABLES

```

```

F(T1,T2,FF)=T2+FF*(T1-T2)

```

```

PLACE START LOCATION OF THE TABLE INTO K.

```

```

K=ISEQ(ITAB)

```

```

PUT NUMBER OF VALUES OF EACH INDEPENDENT VARIABLE INTO
N-ARRAY

```

```

DO 10 I=1,NUM
  NN=K+I-1
  N(I)=T(NN)

```

```

10 CONTINUE

```

```

FIND INDEX VALUES FOR EACH INDEPENDENT VARIABLE SUCH
THAT DESIRED VALUE LIES BETWEEN INDICES

```

```

INITIALIZE KBEG TO THE START OF THE LIST OF INDEPENDENT
VARIABLES AND KEND TO THE END OF THE LIST OF THE
FIRST INDEPENDENT VARIABLE.

```

```

KBEG=K+NUM
KEND=KBEG+N(1)-1

```

```

C      DO:  FOR THE NUMBER OF INDEPENDENT VARIABLES
C
C          DO 500 J=1, NUM
C              I=N(J)
C
C          IF-THEN-ELSE
C
C          IF:  THIS IS THE FIRST INDEPENDENT VARIABLE
C
C              IF (.NOT. (J .EQ. 1)) GO TO 50
C
C          THEN:  DO NOTHING SINCE KBEG AND KEND HAVE
C                  ALREADY BEEN INITIALIZED
C
C              GO TO 60
C
C          ELSE:  INCREMENT KBEG AND KEND
C
C          50      CONTINUE
C                  KBEG=KEND+1
C                  KEND=KBEG+N(J)-1
C
C          60      CONTINUE
C
C          FI:  END OF IF-THEN-ELSE
C
C          IF-THEN-ELSE
C
C          IF:  THE VALUE WANTED IS LESS THAN OR EQUAL TO
C                  THE FIRST VALUE IN THE TABLE.
C
C              IF (.NOT. (U(J) .LE. T(KBEG))) GO TO 65
C
C          THEN:  SET INDEX(J) TO 2 AND GO TO THE ROUTINE
C                  TO COMPUTE THE INTERPOLATION FACTOR
C
C                  INDEX(J)=2
C                  GO TO 140
C
C          ELSE:
C
C          65      CONTINUE
C
C          IF-THEN-ELSE
C
C          IF:  THE VALUE WANTED IS GREATER THAN OR EQUAL
C                  TO THE LAST VALUE OF THE VARIABLE IN THE
C                  TABLE
C
C              IF (.NOT. (U(J) .GE. T(KEND))) GO TO 75
C
C          THEN:  SET THE INDEX TO THE NUMBER OF VALUES OF
C                  THE INDEPENDENT VARIABLE AND GO TO THE
C                  ROUTINE TO COMPUTE THE INTERPOLATION FACTOR
C
C                  INDEX(J)=N(J)
C                  GO TO 140
C
C          ELSE:  COMPUTE THE INDEX VALUES SUCH THAT THE
C                  DESIRED VALUE U(J) LIES BETWEEN THE TABLE
C                  VALUES FOR THOSE COMPUTED INDICES

```



```

75      CONTINUE
      II=1
      KKBEG=KKBEG+1
C
C      DO:  FOR THE NUMBER OF VALUES OF EACH
C            INDEPENDENT VARIABLE
C
C      DO 100 JJ=KKBEG,KEND
C        II=II+1
C
C        IF-THEN-ELSE
C
C        IF:  THE DESIRED VALUE IS LESS THAN OR
C              EQUAL TO THE TABLE VALUE--THE
C              INDEPENDENT VARIABLE VALUE
C
C              IF (.NOT. (U(J) .LE. T(JJ))) GO TO 100
C
C              THEN:  SET THE INDEX TO POINT TO THE TABLE
C                     VALUE AND GO TO THE ROUTINE TO
C                     COMPUTE THE INTERPOLATION FACTOR
C
C                     INDEX(J)=II
C                     GO TO 140
C
C              ELSE:  CONTINUE
C
C              FI:  END OF IF-THEN-ELSE
C
C      100    CONTINUE
C
C      OD:  END OF DO-FOR
C
C      FI:  END OF IF-THEN-ELSE
C
C      FI:  END OF IF-THEN-ELSE
C
C      COMPUTE THE INTERPOLATION FACTOR FAC(J)
C
C      140    CONTINUE
C            IND=KKBEG+INDEX(J)-1
C            T1=T(IND)
C            T2=T(IND-1)
C            FAC(J)=(U(J)-T2)/(T1-T2)
C
C      500    CONTINUE
C
C      OD:  END OF DO-FOR
C
C      *****INTERPOLATION ROUTINE*****
C
C      INITIALIZE KKBEG TO THE BEGINNING OF THE DEPENDENT
C      VARIABLES
C
C      KKBEG=KEND+1
C
C      CASES:  3 CASES (NUM=1,2,3)
C
C      IF (NUM .EQ. 1) GO TO 70
C      IF (NUM .EQ. 2) GO TO 80

```

```

      IF (NUM .EQ. 3) GO TO 90
C
C   PART:  (NUM=1)
C
70    CONTINUE
C
C   THERE IS ONLY ONE INDEPENDENT VARIABLE.  COMPUTE
C   THE INTERPOLATED TABLE VALUE A AND RETURN.
C
      I3=INDEX(1)+KBEG-1
      A=F(T(I3),T(I3-1),FAC(1))
      GO TO 95
C
C   PART:  (NUM=2)
C
80    CONTINUE
C
C   THERE ARE TWO INDEPENDENT VARIABLES.  THUS AN
C   INTERPOLATION WILL BE BASED ON 4 NUMBERS--TWO FOR
C   EACH VARIABLE.  FIND THE LOCATION OF THE 1ST TWO
C   VALUES BEING INTERPOLATED IN THE T-ARRAY.
C
      I3=INDEX(2)+KBEG-1
      I2=INDEX(1)
      KLOC=(I2-1)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   NOT INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA1=F(A1,A2,FAC(2))
C
C   NOW FIND THE LOCATION OF THE 2ND TWO VALUES BEING
C   INTERPOLATED IN THE T-ARRAY
C
      KLOC=(I2-2)*N(2)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   AGAIN INTERPOLATE A1, A2 BASED ON THE 2ND INTERPOLATION FACTOR
C
      AA2=F(A1,A2,FAC(2))
C
C   NOW INTERPOLATE AA1, AA2 BASED ON THE 1ST INTERPOLATION FACTOR
C
      A=F(AA1,AA2,FAC(1))
      GO TO 95
C
C   PART:  (NUM=3)
C
90    CONTINUE
C
C   SINCE THERE ARE THREE INDEPENDENT VARIABLES, THE
C   INTERPOLATION VALUE RETURNED WILL BE BASED ON 8 VALUES
C   FROM THE T-ARRAY.
C
C   FIND THE T-ARRAY LOCATION OF THE 1ST 2 VALUES TO BE
C   INTERPOLATED.
C
      I3=INDEX(3)+KBEG-1
      I2=INDEX(2)
      I1=INDEX(1)

```

```

      KLOC=((I1-1)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA1=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 2ND 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-1)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA2=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 3RD 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-2)*N(2)+(I2-1))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA3=F(A1,A2,FAC(3))
C
C   FIND THE T-ARRAY LOCATION OF THE 4TH 2 VALUES TO BE
C   INTERPOLATED
C
      KLOC=((I1-2)*N(2)+(I2-2))*N(3)+I3
      A1=T(KLOC)
      A2=T(KLOC-1)
C
C   INTERPOLATE
C
      AA4=F(A1,A2,FAC(3))
C
C   INTERPOLATE AA1,AA2 USING THE 2ND INTERPOLATION FACTOR
C
      A1=F(AA1,AA2,FAC(2))
C
C   INTERPOLATE AA3,AA4 USING THE 2ND INTERPOLATION FACTOR
C
      A2=F(AA3,AA4,FAC(2))
C
C   NOW MAKE THE FINAL INTERPOLATION USING FACTOR ONE.
C
      A=F(A1,A2,FAC(1))
C
95  CONTINUE
      RETURN
      END

```

APPENDIX E

ABAQUS HEAT TRANSFER ANALYSIS INPUT FILES

\*HEADING  
 MACH 14 FLOW RESTRICTOR  
 TRANSIENT  
 HEAT TRANSFER ANALYSIS  
 \*NODE. NSET=NALL

1.	0.	35500.	0.		2.	00000
2.	0.	55000.	0.		2.	00000
3.	0.	74500.	0.		2.	00000
4.	0.	35196.	0.	04634.	2.	00000
5.	0.	56199.	0.	09109.	2.	00000
6.	0.	77202.	0.	13585.	2.	00000
7.	0.	34290.	0.	09188.	2.	00000
8.	0.	59594.	0.	17145.	2.	00000
9.	0.	84898.	0.	25102.	2.	00000
10.	0.	35500.	0.		2.	39500
11.	0.	55000.	0.		2.	39500
12.	0.	74500.	0.		2.	39500
13.	0.	35196.	0.	04634.	2.	39500
14.	0.	56199.	0.	09109.	2.	39500
15.	0.	77202.	0.	13585.	2.	39500
16.	0.	34290.	0.	09188.	2.	39500
17.	0.	59594.	0.	17145.	2.	39500
18.	0.	84898.	0.	25102.	2.	39500
19.	0.	35500.	0.		2.	79000
20.	0.	55000.	0.		2.	79000
21.	0.	74500.	0.		2.	79000
22.	0.	35196.	0.	04634.	2.	79000
23.	0.	56199.	0.	09109.	2.	79000
24.	0.	77202.	0.	13585.	2.	79000
25.	0.	34290.	0.	09188.	2.	79000
26.	0.	59594.	0.	17145.	2.	79000
27.	0.	84898.	0.	25102.	2.	79000
28.	1.	62500.	0.		2.	00000
29.	2.	12500.	0.		2.	00000
30.	2.	62500.	0.		2.	00000
31.	1.	61110.	0.	21211.	2.	00000
32.	2.	10682.	0.	27737.	2.	00000
33.	2.	60254.	0.	34263.	2.	00000
34.	1.	56963.	0.	42058.	2.	00000
35.	2.	05259.	0.	54999.	2.	00000
36.	2.	53556.	0.	67940.	2.	00000
37.	1.	62500.	0.		2.	39500
38.	2.	12500.	0.		2.	39500
39.	2.	62500.	0.		2.	39500
40.	1.	61110.	0.	21211.	2.	39500
41.	2.	10682.	0.	27737.	2.	39500
42.	2.	60254.	0.	34263.	2.	39500
43.	1.	56963.	0.	42058.	2.	39500
44.	2.	05259.	0.	54999.	2.	39500
45.	2.	53556.	0.	67940.	2.	39500
46.	1.	62500.	0.		2.	79000
47.	2.	12500.	0.		2.	79000
48.	2.	62500.	0.		2.	79000
49.	1.	61110.	0.	21211.	2.	79000
50.	2.	10682.	0.	27737.	2.	79000
51.	2.	60254.	0.	34263.	2.	79000
52.	1.	56963.	0.	42058.	2.	79000
53.	2.	05259.	0.	54999.	2.	79000
54.	2.	53556.	0.	67940.	2.	79000
58.	0.	32798.	0.	13585.	2.	00000
59.	0.	58820.	0.	25306.	2.	00000
60.	0.	84842.	0.	37027.	2.	00000

61.	0.	30744.	0.	17750.	2.	00000
62.	0.	57765.	0.	33351.	2.	00000
63.	0.	84786.	0.	48951.	2.	00000
67.	0.	32798.	0.	13585.	2.	39500
68.	0.	58820.	0.	25306.	2.	39500
69.	0.	84842.	0.	37027.	2.	39500
70.	0.	30744.	0.	17750.	2.	39500
71.	0.	57765.	0.	33351.	2.	39500
72.	0.	84786.	0.	48951.	2.	39500
76.	0.	32798.	0.	13585.	2.	79000
77.	0.	58820.	0.	25306.	2.	79000
78.	0.	84842.	0.	37027.	2.	79000
79.	0.	30744.	0.	17750.	2.	79000
80.	0.	57765.	0.	33351.	2.	79000
81.	0.	84786.	0.	48951.	2.	79000
83.	0.	96415.	0.	32798.	2.	00000
84.	1.	10000.	0.	35500.	2.	00000
86.	0.	96901.	0.	44512.	2.	00000
87.	1.	09995.	0.	49501.	2.	00000
89.	0.	97388.	0.	56227.	2.	00000
90.	1.	09989.	0.	63502.	2.	00000
92.	0.	96415.	0.	32798.	2.	39500
93.	1.	10000.	0.	35500.	2.	39500
95.	0.	96901.	0.	44512.	2.	39500
96.	1.	09995.	0.	49501.	2.	39500
98.	0.	97388.	0.	56227.	2.	39500
99.	1.	09989.	0.	63502.	2.	39500
101.	0.	96415.	0.	32798.	2.	79000
102.	1.	10000.	0.	35500.	2.	79000
104.	0.	96901.	0.	44512.	2.	79000
105.	1.	09995.	0.	49501.	2.	79000
107.	0.	97388.	0.	56227.	2.	79000
108.	1.	09989.	0.	63502.	2.	79000
110.	1.	23585.	0.	32798.	2.	00000
111.	1.	35102.	0.	25102.	2.	00000
113.	1.	23067.	0.	51776.	2.	00000
114.	1.	35106.	0.	51554.	2.	00000
116.	1.	22550.	0.	70754.	2.	00000
117.	1.	35110.	0.	78006.	2.	00000
119.	1.	23585.	0.	32798.	2.	39500
120.	1.	35102.	0.	25102.	2.	39500
122.	1.	23067.	0.	51776.	2.	39500
123.	1.	35106.	0.	51554.	2.	39500
125.	1.	22550.	0.	70754.	2.	39500
126.	1.	35110.	0.	78006.	2.	39500
128.	1.	23585.	0.	32798.	2.	79000
129.	1.	35102.	0.	25102.	2.	79000
131.	1.	23067.	0.	51776.	2.	79000
132.	1.	35106.	0.	51554.	2.	79000
134.	1.	22550.	0.	70754.	2.	79000
135.	1.	35110.	0.	78006.	2.	79000
139.	1.	50130.	0.	62186.	2.	00000
140.	1.	96324.	0.	81320.	2.	00000
141.	2.	42518.	1.	00454.	2.	00000
142.	1.	40729.	0.	81250.	2.	00000
143.	1.	84030.	1.	06250.	2.	00000
144.	2.	27332.	1.	31250.	2.	00000
148.	1.	50130.	0.	62186.	2.	39500
149.	1.	96324.	0.	81320.	2.	39500
150.	2.	42518.	1.	00454.	2.	39500
151.	1.	40729.	0.	81250.	2.	39500
152.	1.	84030.	1.	06250.	2.	39500

153.	2. 27332.	1. 31250.	2. 39500
157.	1. 50130.	0. 62186.	2. 79000
158.	1. 96324.	0. 81320.	2. 79000
159.	2. 42518.	1. 00454.	2. 79000
160.	1. 40729.	0. 81250.	2. 79000
161.	1. 84030.	1. 06250.	2. 79000
162.	2. 27332.	1. 31250.	2. 79000
163.	0. 35500.	0.	1. 81100
164.	0. 55000.	0.	1. 81100
165.	0. 74500.	0.	1. 81100
166.	0. 35196.	0. 04634.	1. 81100
167.	0. 56199.	0. 09109.	1. 81100
168.	0. 77202.	0. 13585.	1. 81100
169.	0. 34290.	0. 09188.	1. 81100
170.	0. 59594.	0. 17145.	1. 81100
171.	0. 84898.	0. 25102.	1. 81100
172.	0. 35500.	0.	1. 90550
173.	0. 55000.	0.	1. 90550
174.	0. 74500.	0.	1. 90550
175.	0. 35196.	0. 04634.	1. 90550
176.	0. 56199.	0. 09109.	1. 90550
177.	0. 77202.	0. 13585.	1. 90550
178.	0. 34290.	0. 09188.	1. 90550
179.	0. 59594.	0. 17145.	1. 90550
180.	0. 84898.	0. 25102.	1. 90550
190.	1. 62500.	0.	1. 81100
191.	2. 12500.	0.	1. 81100
192.	2. 62500.	0.	1. 81100
193.	1. 61110.	0. 21211.	1. 81100
194.	2. 10682.	0. 27737.	1. 81100
195.	2. 60254.	0. 34263.	1. 81100
196.	1. 56963.	0. 42058.	1. 81100
197.	2. 05259.	0. 54999.	1. 81100
198.	2. 53556.	0. 67940.	1. 81100
199.	1. 62500.	0.	1. 90550
200.	2. 12500.	0.	1. 90550
201.	2. 62500.	0.	1. 90550
202.	1. 61110.	0. 21211.	1. 90550
203.	2. 10682.	0. 27737.	1. 90550
204.	2. 60254.	0. 34263.	1. 90550
205.	1. 56963.	0. 42058.	1. 90550
206.	2. 05259.	0. 54999.	1. 90550
207.	2. 53556.	0. 67940.	1. 90550
220.	0. 32798.	0. 13585.	1. 81100
221.	0. 58820.	0. 25306.	1. 81100
222.	0. 84842.	0. 37027.	1. 81100
223.	0. 30744.	0. 17750.	1. 81100
224.	0. 57765.	0. 33351.	1. 81100
225.	0. 84786.	0. 48951.	1. 81100
229.	0. 32798.	0. 13585.	1. 90550
230.	0. 58820.	0. 25306.	1. 90550
231.	0. 84842.	0. 37027.	1. 90550
232.	0. 30744.	0. 17750.	1. 90550
233.	0. 57765.	0. 33351.	1. 90550
234.	0. 84786.	0. 48951.	1. 90550
245.	0. 96415.	0. 32798.	1. 81100
246.	1. 10000.	0. 35500.	1. 81100
248.	0. 96901.	0. 44512.	1. 81100
249.	1. 09995.	0. 49501.	1. 81100
251.	0. 97388.	0. 56227.	1. 81100
252.	1. 09989.	0. 63502.	1. 81100
254.	0. 96415.	0. 32798.	1. 90550

255.	1.	10000.	0.	35500.	1.	90550
257.	0.	96901.	0.	44512.	1.	90550
258.	1.	09995.	0.	49501.	1.	90550
260.	0.	97388.	0.	56227.	1.	90550
261.	1.	09989.	0.	63502.	1.	90550
272.	1.	23585.	0.	32798.	1.	81100
273.	1.	35102.	0.	25102.	1.	81100
275.	1.	23067.	0.	51776.	1.	81100
276.	1.	35106.	0.	51554.	1.	81100
278.	1.	22550.	0.	70754.	1.	81100
279.	1.	35110.	0.	78006.	1.	81100
281.	1.	23585.	0.	32798.	1.	90550
282.	1.	35102.	0.	25102.	1.	90550
284.	1.	23067.	0.	51776.	1.	90550
285.	1.	35106.	0.	51554.	1.	90550
287.	1.	22550.	0.	70754.	1.	90550
288.	1.	35110.	0.	78006.	1.	90550
301.	1.	50130.	0.	62186.	1.	81100
302.	1.	96324.	0.	81320.	1.	81100
303.	2.	42518.	1.	00454.	1.	81100
304.	1.	40729.	0.	81250.	1.	81100
305.	1.	84030.	1.	06250.	1.	81100
306.	2.	27332.	1.	31250.	1.	81100
310.	1.	50130.	0.	62186.	1.	90550
311.	1.	96324.	0.	81320.	1.	90550
312.	2.	42518.	1.	00454.	1.	90550
313.	1.	40729.	0.	81250.	1.	90550
314.	1.	84030.	1.	06250.	1.	90550
315.	2.	27332.	1.	31250.	1.	90550
325.	0.	40000.	0.		0.	36000
326.	0.	55000.	0.		0.	36000
327.	0.	70000.	0.		0.	36000
328.	0.	39658.	0.	05221.	0.	36000
329.	0.	56351.	0.	10264.	0.	36000
330.	0.	73045.	0.	15307.	0.	36000
331.	0.	38637.	0.	10353.	0.	36000
332.	0.	60176.	0.	19319.	0.	36000
333.	0.	81716.	0.	28284.	0.	36000
334.	0.	38946.	0.		0.	70000
335.	0.	55000.	0.		0.	70000
336.	0.	71054.	0.		0.	70000
337.	0.	38612.	0.	05083.	0.	70000
338.	0.	56317.	0.	09993.	0.	70000
339.	0.	74021.	0.	14903.	0.	70000
340.	0.	37619.	0.	10080.	0.	70000
341.	0.	60040.	0.	18809.	0.	70000
342.	0.	82461.	0.	27539.	0.	70000
343.	0.	37891.	0.		1.	04000
344.	0.	55000.	0.		1.	04000
345.	0.	72109.	0.		1.	04000
346.	0.	37567.	0.	04946.	1.	04000
347.	0.	56282.	0.	09722.	1.	04000
348.	0.	74997.	0.	14498.	1.	04000
349.	0.	36600.	0.	09807.	1.	04000
350.	0.	59903.	0.	18300.	1.	04000
351.	0.	83207.	0.	26793.	1.	04000
355.	0.	36955.	0.	15307.	0.	36000
356.	0.	59358.	0.	26532.	0.	36000
357.	0.	81760.	0.	37757.	0.	36000
358.	0.	34641.	0.	20000.	0.	36000
359.	0.	58223.	0.	33615.	0.	36000
360.	0.	81805.	0.	47230.	0.	36000



364.	0.	35981.	0.	14904.	0.	70000
365.	0.	59232.	0.	26245.	0.	70000
366.	0.	82482.	0.	37586.	0.	70000
367.	0.	33728.	0.	19473.	0.	70000
368.	0.	58116.	0.	33553.	0.	70000
369.	0.	82503.	0.	47633.	0.	70000
373.	0.	35007.	0.	14500.	1.	04000
374.	0.	59106.	0.	25958.	1.	04000
375.	0.	83204.	0.	37415.	1.	04000
376.	0.	32815.	0.	18946.	1.	04000
377.	0.	58008.	0.	33491.	1.	04000
378.	0.	83202.	0.	48037.	1.	04000
380.	0.	94693.	0.	36955.	0.	36000
381.	1.	10000.	0.	40000.	0.	36000
383.	0.	95323.	0.	46177.	0.	36000
384.	1.	10052.	0.	51784.	0.	36000
386.	0.	95954.	0.	55399.	0.	36000
387.	1.	10103.	0.	63568.	0.	36000
389.	0.	95097.	0.	35979.	0.	70000
390.	1.	10000.	0.	38946.	0.	70000
392.	0.	95693.	0.	45786.	0.	70000
393.	1.	10038.	0.	51249.	0.	70000
395.	0.	96290.	0.	55593.	0.	70000
396.	1.	10076.	0.	63553.	0.	70000
398.	0.	95501.	0.	35003.	1.	04000
399.	1.	10000.	0.	37891.	1.	04000
401.	0.	96064.	0.	45395.	1.	04000
402.	1.	10025.	0.	50714.	1.	04000
404.	0.	96626.	0.	55787.	1.	04000
405.	1.	10050.	0.	63537.	1.	04000
407.	1.	21670.	0.	36262.	0.	36000
408.	1.	33341.	0.	32523.	0.	36000
410.	1.	18727.	0.	51418.	0.	36000
411.	1.	27402.	0.	51051.	0.	36000
413.	1.	14482.	0.	66097.	0.	36000
414.	1.	18862.	0.	68625.	0.	36000
416.	1.	22097.	0.	35453.	0.	70000
417.	1.	33757.	0.	30771.	0.	70000
419.	1.	19708.	0.	51518.	0.	70000
420.	1.	29219.	0.	51106.	0.	70000
422.	1.	16373.	0.	67188.	0.	70000
423.	1.	22669.	0.	70823.	0.	70000
425.	1.	22523.	0.	34644.	1.	04000
426.	1.	34173.	0.	29020.	1.	04000
428.	1.	20689.	0.	51619.	1.	04000
429.	1.	31035.	0.	51160.	1.	04000
431.	1.	18263.	0.	68279.	1.	04000
432.	1.	26477.	0.	73021.	1.	04000
433.	1.	45500.	0.		2.	00000
435.	1.	42798.	0.	13585.	2.	00000
439.	1.	45500.	0.		2.	39500
441.	1.	42798.	0.	13585.	2.	39500
445.	1.	45500.	0.		2.	79000
447.	1.	42798.	0.	13585.	2.	79000
469.	0.	23000.	0.		1.	81100
471.	0.	22803.	0.	03002.	1.	81100
473.	0.	22216.	0.	05953.	1.	81100
475.	0.	23000.	0.		1.	90550
477.	0.	22803.	0.	03002.	1.	90550
479.	0.	22216.	0.	05953.	1.	90550
481.	0.	23000.	0.		2.	00000
483.	0.	22803.	0.	03002.	2.	00000

485.	0.22216.	0.05953.	2.00000
487.	0.93737.	0.16263.	1.81100
489.	0.88751.	0.08802.	1.81100
491.	0.87000.	0.	1.81100
493.	0.93737.	0.16263.	1.90550
495.	0.88751.	0.08802.	1.90550
497.	0.87000.	0.	1.90550
499.	0.93737.	0.16263.	2.00000
501.	0.88751.	0.08802.	2.00000
503.	0.87000.	0.	2.00000
505.	1.10000.	0.23000.	1.81100
507.	1.01198.	0.21249.	1.81100
511.	1.10000.	0.23000.	1.90550
513.	1.01198.	0.21249.	1.90550
517.	1.10000.	0.23000.	2.00000
519.	1.01198.	0.21249.	2.00000
523.	1.26263.	0.16263.	1.81100
525.	1.18802.	0.21249.	1.81100
529.	1.26263.	0.16263.	1.90550
531.	1.18802.	0.21249.	1.90550
535.	1.26263.	0.16263.	2.00000
537.	1.18802.	0.21249.	2.00000
541.	1.33000.	0.	1.81100
542.	1.45500.	0.	1.81100
543.	1.31249.	0.08802.	1.81100
544.	1.42798.	0.13585.	1.81100
547.	1.33000.	0.	1.90550
548.	1.45500.	0.	1.90550
549.	1.31249.	0.08802.	1.90550
550.	1.42798.	0.13585.	1.90550
553.	1.33000.	0.	2.00000
555.	1.31249.	0.08802.	2.00000
579.	0.21249.	0.08802.	1.81100
581.	0.19919.	0.11500.	1.81100
585.	0.21249.	0.08802.	1.90550
587.	0.19919.	0.11500.	1.90550
591.	0.21249.	0.08802.	2.00000
593.	0.19919.	0.11500.	2.00000
613.	0.27250.	0.	0.36000
615.	0.27017.	0.03557.	0.36000
617.	0.26321.	0.07053.	0.36000
619.	0.26254.	0.	0.70000
621.	0.26030.	0.03427.	0.70000
623.	0.25360.	0.06795.	0.70000
625.	0.25298.	0.	1.04000
627.	0.25042.	0.03297.	1.04000
629.	0.24398.	0.06537.	1.04000
631.	0.90731.	0.19269.	0.36000
633.	0.84824.	0.10428.	0.36000
635.	0.82790.	0.	0.36000
637.	0.91436.	0.18564.	0.70000
639.	0.85746.	0.10046.	0.70000
641.	0.83746.	0.	0.70000
643.	0.92140.	0.17860.	1.04000
645.	0.86667.	0.09665.	1.04000
647.	0.84742.	0.	1.04000
649.	1.10000.	0.27250.	0.36000
651.	0.99572.	0.25176.	0.36000
655.	1.10000.	0.26254.	0.70000
657.	0.99948.	0.24255.	0.70000
661.	1.10000.	0.25258.	1.04000
663.	1.00325.	0.23334.	1.04000

667.	1	29269.	0	19269.	0	36000
669.	1	20428.	0	25176.	0	36000
673.	1	28564.	0	18564.	0	70000
675.	1	20047.	0	24254.	0	70000
679.	1	27860.	0	17860.	1	04000
681.	1	19665.	0	23333.	1	04000
685.	1	37250.	0		0	36000
687.	1	35176.	0	10428.	0	36000
688.	1	36265.	0	16413.	0	36000
691.	1	36254.	0		0	70000
692.	1	39183.	0		0	70000
693.	1	34254.	0	10047.	0	70000
694.	1	37814.	0	15674.	0	70000
697.	1	35258.	0		1	04000
698.	1	41116.	0		1	04000
699.	1	33333.	0	09665.	1	04000
700.	1	39363.	0	14936.	1	04000
704.	1	62500.	0		0	36000
706.	1	61110.	0	21211.	0	36000
708.	1	56963.	0	42058.	0	36000
710.	1	62500.	0		0	70000
712.	1	61110.	0	21210.	0	70000
714.	1	56963.	0	42058.	0	70000
716.	1	62500.	0		1	04000
718.	1	61110.	0	21210.	1	04000
720.	1	56963.	0	42058.	1	04000
723.	0	25176.	0	10428.	0	36000
725.	0	23599.	0	13625.	0	36000
729.	0	24256.	0	10047.	0	70000
731.	0	22737.	0	13127.	0	70000
735.	0	23336.	0	09666.	1	04000
737.	0	21874.	0	12629.	1	04000
742.	1	50130.	0	62186.	0	36000
744.	1	40729.	0	81250.	0	36000
748.	1	50130.	0	62186.	0	70000
750.	1	40729.	0	81250.	0	70000
754.	1	50130.	0	62186.	1	04000
756.	1	40729.	0	81250.	1	04000
757.	1	37250.	0		0	
758.	1	62500.	0		0	
759.	1	36265.	0	16413.	0	
760.	1	61110.	0	21211.	0	
761.	1	33341.	0	32523.	0	
762.	1	56963.	0	42058.	0	
763.	1	37250.	0		0	18000
764.	1	62500.	0		0	18000
765.	1	36265.	0	16413.	0	18000
766.	1	61110.	0	21211.	0	18000
767.	1	33341.	0	32523.	0	18000
768.	1	56963.	0	42058.	0	18000
777.	1	27402.	0	51051.	0	
778.	1	50130.	0	62186.	0	
779.	1	18862.	0	68625.	0	
780.	1	40729.	0	81250.	0	
783.	1	27402.	0	51051.	0	18000
784.	1	50130.	0	62186.	0	18000
785.	1	18862.	0	68625.	0	18000
786.	1	40729.	0	81250.	0	18000
799.	0	24506.	0		1	29700
800.	0	37094.	0		1	29700
801.	0	24296.	0	03199.	1	29700
802.	0	36777.	0	04842.	1	29700

803.	0	23671.	0	06342.	1	29700
804.	0	35830.	0	09601.	1	29700
805.	0	23753.	0		1	55400
806.	0	36297.	0		1	55400
807.	0	23550.	0	03100.	1	55400
808.	0	35986.	0	04738.	1	55400
809.	0	22943.	0	06148.	1	55400
810.	0	35060.	0	09394.	1	55400
823.	0	92672.	0	17328.	1	29700
824.	0	83771.	0	26229.	1	29700
825.	0	87361.	0	09377.	1	29700
826.	0	75732.	0	14194.	1	29700
827.	0	85494.	0		1	29700
828.	0	72906.	0		1	29700
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854.	1	10000.	0	36297.	1	55400
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946.	0	34270.	0	14195.	1	29700
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1526.	1. 50130.	0. 62186.	2. 59250
1527.	1. 37920.	0. 79628.	2. 39500
1529.	1. 40729.	0. 81250.	2. 59250
1532.	1. 53874.	0. 52239.	2. 79000
1533.	1. 42618.	0. 56870.	2. 79000
1535.	1. 45744.	0. 71867.	2. 79000
1536.	1. 37920.	0. 79628.	2. 79000
1541.	2. 01220.	0. 68313.	2. 00000
1543.	2. 48566.	0. 84387.	2. 00000
1545.	1. 73227.	0. 71753.	2. 00000
1548.	2. 19421.	0. 90887.	2. 00000
1549.	1. 90589.	0. 93980.	2. 00000
1550.	1. 96324.	0. 81320.	2. 19750
1551.	2. 35433.	1. 16093.	2. 00000
1552.	2. 42518.	1. 00454.	2. 19750
1553.	1. 62380.	0. 93750.	2. 00000
1555.	2. 05681.	1. 18750.	2. 00000
1556.	1. 84030.	1. 06250.	2. 19750
1557.	2. 27332.	1. 31250.	2. 19750
1562.	2. 01220.	0. 68313.	2. 39500
1564.	2. 48566.	0. 84387.	2. 39500
1566.	1. 73227.	0. 71753.	2. 39500
1569.	2. 19421.	0. 90887.	2. 39500
1570.	1. 90589.	0. 93980.	2. 39500
1571.	1. 96324.	0. 81320.	2. 59250
1572.	2. 35433.	1. 16093.	2. 39500
1573.	2. 42518.	1. 00454.	2. 59250
1574.	1. 62380.	0. 93750.	2. 39500
1576.	2. 05681.	1. 18750.	2. 39500
1577.	1. 84030.	1. 06250.	2. 59250
1578.	2. 27332.	1. 31250.	2. 59250
1582.	2. 01220.	0. 68313.	2. 79000
1583.	2. 48566.	0. 84387.	2. 79000
1584.	1. 73227.	0. 71753.	2. 79000
1586.	2. 19421.	0. 90887.	2. 79000
1587.	1. 90589.	0. 93980.	2. 79000
1588.	2. 35433.	1. 16093.	2. 79000
1589.	1. 62380.	0. 93750.	2. 79000
1590.	2. 05681.	1. 18750.	2. 79000
1591.	0. 29250.	0.	1. 81100
1592.	0. 22951.	0. 01505.	1. 81100
1593.	0. 23000.	0.	1. 85825
1594.	0. 35424.	0. 02323.	1. 81100
1595.	0. 35500.	0.	1. 85825
1596.	0. 29000.	0. 03818.	1. 81100
1597.	0. 22558.	0. 04486.	1. 81100
1598.	0. 22803.	0. 03002.	1. 85825
1599.	0. 34818.	0. 06924.	1. 81100
1600.	0. 35196.	0. 04634.	1. 85825
1601.	0. 28253.	0. 07570.	1. 81100

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1603.	0.	34290.	0.	09188.	1	85825
1604.	0.	29250.	0.		1	90550
1605.	0.	22951.	0.	01505.	1	90550
1606.	0.	23000.	0.		1	95275
1607.	0.	35424.	0.	02323.	1	90550
1608.	0.	35500.	0.		1	95275
1609.	0.	29000.	0.	03818.	1	90550
1610.	0.	22558.	0.	04486.	1	90550
1611.	0.	22803.	0.	03002.	1	95275
1612.	0.	34818.	0.	06924.	1	90550
1613.	0.	35196.	0.	04634.	1	95275
1614.	0.	28253.	0.	07570.	1	90550
1615.	0.	22216.	0.	05953.	1	95275
1616.	0.	34290.	0.	09188.	1	95275
1617.	0.	29250.	0.		2	00000
1618.	0.	22951.	0.	01505.	2	00000
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1621.	0.	22558.	0.	04486.	2	00000
1623.	0.	28253.	0.	07570.	2	00000
1624.	0.	45250.	0.		1	81100
1627.	0.	64750.	0.		1	81100
1628.	0.	55299.	0.	04587.	1	81100
1629.	0.	55000.	0.		1	85825
1630.	0.	75183.	0.	06931.	1	81100
1631.	0.	74500.	0.		1	85825
1632.	0.	45698.	0.	06872.	1	81100
1635.	0.	66701.	0.	11347.	1	81100
1636.	0.	57608.	0.	13231.	1	81100
1637.	0.	56199.	0.	09109.	1	85825
1638.	0.	80480.	0.	19718.	1	81100
1639.	0.	77202.	0.	13585.	1	85825
1640.	0.	46942.	0.	13167.	1	81100
1642.	0.	72246.	0.	21124.	1	81100
1643.	0.	59594.	0.	17145.	1	85825
1644.	0.	84898.	0.	25102.	1	85825
1645.	0.	45250.	0.		1	90550
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1649.	0.	55299.	0.	04587.	1	90550
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1651.	0.	75183.	0.	06931.	1	90550
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1653.	0.	45698.	0.	06872.	1	90550
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1659.	0.	80480.	0.	19718.	1	90550
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1661.	0.	46942.	0.	13167.	1	90550
1663.	0.	72246.	0.	21124.	1	90550
1664.	0.	59594.	0.	17145.	1	95275
1665.	0.	84898.	0.	25102.	1	95275
1678.	0.	89317.	0.	20683.	1	81100
1679.	0.	90874.	0.	12775.	1	81100
1680.	0.	93737.	0.	16263.	1	85825
1683.	0.	82977.	0.	11193.	1	81100
1684.	0.	87443.	0.	04491.	1	81100
1685.	0.	88751.	0.	08802.	1	85825
1688.	0.	80750.	0.		1	81100
1689.	0.	87000.	0.		1	85825
1691.	0.	89317.	0.	20683.	1	90550
1692.	0.	90874.	0.	12775.	1	90550

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1697,	0.87443,	0.04491,	1.90550
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1719,	0.90282,	0.29521,	1.81100
1720,	0.96415,	0.32798,	1.85825
1724,	1.10000,	0.29250,	1.90550
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1727,	1.03069,	0.34817,	1.90550
1728,	1.10000,	0.35500,	1.95275
1729,	0.98806,	0.27023,	1.90550
1730,	0.97225,	0.19126,	1.90550
1731,	1.01198,	0.21249,	1.95275
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1747,	1.29718,	0.29521,	1.81100
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1749,	1.21193,	0.27023,	1.81100
1750,	1.14491,	0.22557,	1.81100
1751,	1.18802,	0.21249,	1.85825
1752,	1.16931,	0.34817,	1.81100
1753,	1.23585,	0.32798,	1.85825
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1760,	1.29718,	0.29521,	1.90550
1761,	1.35102,	0.25102,	1.95275
1762,	1.21193,	0.27023,	1.90550
1763,	1.14491,	0.22557,	1.90550
1764,	1.18802,	0.21249,	1.95275
1765,	1.16931,	0.34817,	1.90550
1766,	1.23585,	0.32798,	1.95275
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1782.	1	37023.	0	11193.	1	81100
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1784.	1	31249.	0	08802.	1	85825
1785.	1	39520.	0	19718.	1	81100
1786.	1	42798.	0	13585.	1	85825
1790.	1	39250.	0		1	90550
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1792.	1	33000.	0		1	95275
1793.	1	44817.	0	06931.	1	90550
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1795.	1	37023.	0	11193.	1	90550
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1797.	1	31249.	0	08802.	1	95275
1798.	1	39520.	0	19718.	1	90550
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1819.	1	61110.	0	21211.	1	85825
1820.	1	46033.	0	33580.	1	81100
1822.	1	56963.	0	42058.	1	85825
1823.	1	54000.	0		1	90550
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1828.	1	51954.	0	17398.	1	90550
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1833.	1	46033.	0	33580.	1	90550
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1846.	2	37500.	0		1	81100
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1850.	2	62500.	0		1	85825
1851.	1	85896.	0	24474.	1	81100
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1855.	2	08418.	0	41449.	1	81100
1856.	2	10682.	0	27737.	1	85825
1857.	2	57458.	0	51202.	1	81100
1858.	2	60254.	0	34263.	1	85825
1859.	1	81111.	0	48529.	1	81100
1861.	2	29407.	0	61470.	1	81100
1862.	2	05259.	0	54999.	1	85825
1863.	2	53556.	0	67940.	1	85825
1864.	1	87500.	0		1	90550
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1882.	2	29407.	0.	61470.	1.	90550
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1884.	2	53556.	0.	67940.	1.	95275
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1904.	0	21249.	0.	08802.	1.	85825
1905.	0	31840.	0.	15700.	1.	81100
1906.	0	32798.	0.	13585.	1.	85825
1907.	0	25331.	0	14625.	1	81100
1908.	0	19919.	0	11500.	1.	85825
1909.	0	30744.	0.	17750.	1.	85825
1911.	0	21779.	0.	07394.	1.	90550
1913.	0	33616.	0.	11412.	1.	90550
1915.	0	27023.	0.	11193.	1.	90550
1916.	0	20628.	0.	10172.	1.	90550
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1918.	0	31840.	0.	15700.	1.	90550
1919.	0	32798.	0.	13585.	1.	95275
1920.	0	25331.	0.	14625.	1.	90550
1921.	0	19919.	0.	11500.	1.	95275
1922.	0	30744.	0.	17750.	1.	95275
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1926.	0	27023.	0.	11193.	2.	00000
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1936.	0	84870.	0.	31065.	1.	81100
1938.	0	45809.	0.	19446.	1	81100
1941.	0	71831.	0.	31166.	1.	81100
1942.	0	58329.	0	29329.	1.	81100
1943.	0	58820.	0.	25306.	1.	85825
1944.	0	84814.	0.	42989.	1.	81100
1945.	0	84842.	0.	37027.	1.	85825
1946.	0	44254.	0.	25550.	1.	81100
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1950.	0	84786.	0.	48951.	1.	85825
1955.	0	59244.	0.	21222.	1.	90550
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1965.	0	84814.	0.	42989.	1.	90550
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1997.	0	96901.	0.	44512.	1.	85825
1998.	1	09992.	0.	56502.	1.	81100

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2000	0	91087	0	52589	1	81100
2002	1	03689	0	59865	1	81100
2003	0	97388	0	56227	1	85825
2004	1	09989	0	63502	1	85825
2009	0	96658	0	38655	1	90550
2011	1	09997	0	42501	1	90550
2013	0	90696	0	41062	1	90550
2016	1	03340	0	47328	1	90550
2017	0	97145	0	50370	1	90550
2018	0	96901	0	44512	1	95275
2019	1	09992	0	56502	1	90550
2020	1	09995	0	49501	1	95275
2021	0	91087	0	52589	1	90550
2023	1	03689	0	59865	1	90550
2024	0	97388	0	56227	1	95275
2025	1	09989	0	63502	1	95275
2042	1	23326	0	42287	1	81100
2044	1	35104	0	38328	1	81100
2046	1	16486	0	50948	1	81100
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2051	1	23067	0	51776	1	85825
2052	1	35108	0	64780	1	81100
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2054	1	16270	0	67128	1	81100
2056	1	28830	0	74380	1	81100
2057	1	22550	0	70754	1	85825
2058	1	35110	0	78006	1	85825
2063	1	23326	0	42287	1	90550
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2070	1	29097	0	51961	1	90550
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2073	1	35108	0	64780	1	90550
2074	1	35106	0	51554	1	95275
2075	1	16270	0	67128	1	90550
2077	1	28830	0	74380	1	90550
2078	1	22550	0	70754	1	95275
2079	1	35110	0	78006	1	95275
2095	1	53874	0	52239	1	81100
2097	1	42618	0	56870	1	81100
2100	1	45744	0	71867	1	81100
2101	1	50130	0	62186	1	85825
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2110	1	42618	0	56870	1	90550
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2114	1	50130	0	62186	1	95275
2115	1	37920	0	79628	1	90550
2117	1	40729	0	81250	1	95275
2129	2	01220	0	68313	1	81100
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2133	1	73227	0	71753	1	81100
2136	2	19421	0	90887	1	81100
2137	1	90589	0	93980	1	81100
2138	1	96324	0	81320	1	85825
2139	2	35433	1	16093	1	81100
2140	2	42518	1	00454	1	85825
2141	1	62380	0	93750	1	81100

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2157,	2.	19421,	0.	90887,	1.	90550
2158,	1.	90589,	0.	93980,	1.	90550
2159,	1.	96324,	0.	81320,	1.	95275
2160,	2.	35433,	1.	16093,	1.	90550
2161,	2.	42518,	1.	00454,	1.	95275
2162,	1.	62380,	0.	93750,	1.	90550
2164,	2.	05681,	1.	18750,	1.	90550
2165,	1.	84030,	1.	06250,	1.	95275
2166,	2.	27332,	1.	31250,	1.	95275
2179,	0.	31575,	0.		1.	04000
2180,	0.	25204,	0.	01652,	1.	04000
2181,	0.	24882,	0.		1.	16850
2182,	0.	37810,	0.	02478,	1.	04000
2183,	0.	37493,	0.		1.	16850
2184,	0.	31305,	0.	04121,	1.	04000
2185,	0.	24773,	0.	04928,	1.	04000
2186,	0.	24669,	0.	03248,	1.	16850
2187,	0.	37163,	0.	07392,	1.	04000
2188,	0.	37172,	0.	04894,	1.	16850
2189,	0.	30499,	0.	08172,	1.	04000
2190,	0.	24034,	0.	06440,	1.	16850
2191,	0.	36215,	0.	09704,	1.	16850
2192,	0.	30800,	0.		1.	29700
2193,	0.	24453,	0.	01603,	1.	29700
2194,	0.	24129,	0.		1.	42550
2195,	0.	37015,	0.	02426,	1.	29700
2196,	0.	36696,	0.		1.	42550
2197,	0.	30536,	0.	04020,	1.	29700
2198,	0.	24035,	0.	04781,	1.	29700
2199,	0.	23923,	0.	03149,	1.	42550
2200,	0.	36381,	0.	07236,	1.	29700
2201,	0.	36382,	0.	04790,	1.	42550
2202,	0.	29750,	0.	07972,	1.	29700
2203,	0.	23307,	0.	06245,	1.	42550
2204,	0.	35445,	0.	09498,	1.	42550
2205,	0.	30025,	0.		1.	55400
2206,	0.	23702,	0.	01554,	1.	55400
2207,	0.	23376,	0.		1.	68250
2208,	0.	36219,	0.	02375,	1.	55400
2209,	0.	35899,	0.		1.	68250
2210,	0.	29768,	0.	03919,	1.	55400
2211,	0.	23296,	0.	04633,	1.	55400
2212,	0.	23176,	0.	03051,	1.	68250
2213,	0.	35600,	0.	07080,	1.	55400
2214,	0.	35591,	0.	04686,	1.	68250
2215,	0.	29002,	0.	07771,	1.	55400
2216,	0.	22580,	0.	06050,	1.	68250
2217,	0.	34675,	0.	09291,	1.	68250
2225,	0.	46446,	0.		1.	04000
2228,	0.	63554,	0.		1.	04000
2229,	0.	55319,	0.	04917,	1.	04000
2230,	0.	55000,	0.		1.	16850
2231,	0.	72833,	0.	07393,	1.	04000
2232,	0.	72507,	0.		1.	16850
2233,	0.	46924,	0.	07334,	1.	04000
2236,	0.	65639,	0.	12110,	1.	04000



2237.	0	57791.	0	14138.	1	04000
2238.	0	56268.	0	09620.	1	16850
2239.	0	78491.	0	21052.	1	04000
2240.	0	75364.	0	14346.	1	16850
2241.	0	48252.	0	14053.	1	04000
2243.	0	71555.	0	22547.	1	04000
2244.	0	59852.	0	18108.	1	16850
2245.	0	83489.	0	26511.	1	16850
2246.	0	46047.	0		1	29700
2249.	0	63953.	0		1	29700
2250.	0	55314.	0	04819.	1	29700
2251.	0	55000.	0		1	42550
2252.	0	73618.	0	07248.	1	29700
2253.	0	73304.	0		1	42550
2254.	0	46515.	0	07180.	1	29700
2257.	0	65993.	0	11856.	1	29700
2258.	0	57730.	0	13836.	1	29700
2259.	0	56241.	0	09416.	1	42550
2260.	0	79149.	0	20600.	1	29700
2261.	0	76099.	0	14042.	1	42550
2262.	0	47815.	0	13758.	1	29700
2264.	0	71785.	0	22072.	1	29700
2265.	0	59749.	0	17723.	1	42550
2266.	0	84052.	0	25948.	1	42550
2267.	0	45649.	0		1	55400
2270.	0	64351.	0		1	55400
2271.	0	55304.	0	04684.	1	55400
2272.	0	55000.	0		1	68250
2273.	0	74398.	0	07076.	1	55400
2274.	0	74101.	0		1	68250
2275.	0	46107.	0	07026.	1	55400
2278.	0	66347.	0	11602.	1	55400
2279.	0	57669.	0	13533.	1	55400
2280.	0	56213.	0	09212.	1	68250
2281.	0	79822.	0	20171.	1	55400
2282.	0	76835.	0	13737.	1	68250
2283.	0	47379.	0	13462.	1	55400
2285.	0	72016.	0	21598.	1	55400
2286.	0	59646.	0	17338.	1	68250
2287.	0	84616.	0	25384.	1	68250
2300.	0	87673.	0	22327.	1	04000
2301.	0	88996.	0	14033.	1	04000
2302.	0	92406.	0	17594.	1	16850
2305.	0	80832.	0	12081.	1	04000
2306.	0	85225.	0	04929.	1	04000
2307.	0	87014.	0	09521.	1	16850
2310.	0	78425.	0		1	04000
2311.	0	85118.	0		1	16850
2313.	0	88221.	0	21779.	1	29700
2314.	0	89619.	0	13609.	1	29700
2315.	0	92938.	0	17062.	1	42550
2318.	0	81547.	0	11785.	1	29700
2319.	0	85965.	0	04788.	1	29700
2320.	0	87709.	0	09233.	1	42550
2323.	0	79200.	0		1	29700
2324.	0	85871.	0		1	42550
2326.	0	88769.	0	21231.	1	55400
2327.	0	90252.	0	13200.	1	55400
2328.	0	93470.	0	16530.	1	68250
2331.	0	82262.	0	11489.	1	55400
2332.	0	86702.	0	04630.	1	55400
2333.	0	88403.	0	08946.	1	68250

2336.	0.79975,	0.	1.55400
2337.	0.86624,	0.	1.68250
2346.	1.10000,	0.31575,	1.04000
2347.	1.05068,	0.24785,	1.04000
2348.	1.10000,	0.24882,	1.16850
2349.	1.02606,	0.37167,	1.04000
2350.	1.10000,	0.37493,	1.16850
2351.	0.97913,	0.29168,	1.04000
2352.	0.95955,	0.20995,	1.04000
2353.	1.00471,	0.22986,	1.16850
2354.	0.88947,	0.31509,	1.04000
2355.	0.95653,	0.34636,	1.16850
2359.	1.10000,	0.30800,	1.29700
2360.	1.05209,	0.24042,	1.29700
2361.	1.10000,	0.24129,	1.42550
2362.	1.02752,	0.36382,	1.29700
2363.	1.10000,	0.36696,	1.42550
2364.	0.98211,	0.28453,	1.29700
2365.	0.96383,	0.20375,	1.29700
2366.	1.00762,	0.22292,	1.42550
2367.	0.89400,	0.30851,	1.29700
2368.	0.95958,	0.33900,	1.42550
2372.	1.10000,	0.30025,	1.55400
2373.	1.05368,	0.23301,	1.55400
2374.	1.10000,	0.23376,	1.68250
2375.	1.02924,	0.35602,	1.55400
2376.	1.10000,	0.35899,	1.68250
2377.	0.98509,	0.27738,	1.55400
2378.	0.96796,	0.19745,	1.55400
2379.	1.01053,	0.21597,	1.68250
2380.	0.89829,	0.30178,	1.55400
2381.	0.96262,	0.33165,	1.68250
2392.	1.31016,	0.23440,	1.04000
2393.	1.24034,	0.21004,	1.04000
2394.	1.27594,	0.17594,	1.16850
2395.	1.28487,	0.32120,	1.04000
2396.	1.34328,	0.28367,	1.16850
2397.	1.21094,	0.28989,	1.04000
2398.	1.14928,	0.24775,	1.04000
2399.	1.19521,	0.22986,	1.16850
2400.	1.16341,	0.36574,	1.04000
2401.	1.22700,	0.34336,	1.16850
2405.	1.30905,	0.22521,	1.29700
2406.	1.23610,	0.20381,	1.29700
2407.	1.27062,	0.17062,	1.42550
2408.	1.28890,	0.31259,	1.29700
2409.	1.34637,	0.27061,	1.42550
2410.	1.21127,	0.28334,	1.29700
2411.	1.14788,	0.24035,	1.29700
2412.	1.19233,	0.22291,	1.42550
2413.	1.16547,	0.35986,	1.29700
2414.	1.23054,	0.33721,	1.42550
2418.	1.30794,	0.21602,	1.55400
2419.	1.23200,	0.19748,	1.55400
2420.	1.26530,	0.16530,	1.68250
2421.	1.29293,	0.30397,	1.55400
2422.	1.34947,	0.25755,	1.68250
2423.	1.21160,	0.27679,	1.55400
2424.	1.14630,	0.23298,	1.55400
2425.	1.18946,	0.21597,	1.68250
2426.	1.16726,	0.35405,	1.55400
2427.	1.23408,	0.33105,	1.68250

2438.	1	38187.	0.		1	04000
2439.	1	34775.	0	04929.	1	04000
2440.	1	34882.	0		1	16850
2441.	1	40676.	0	07519.	1	04000
2442.	1	41847.	0		1	16850
2443.	1	36348.	0	12300.	1	04000
2444.	1	31004.	0	14034.	1	04000
2445.	1	32986.	0	09521.	1	16850
2446.	1	37189.	0	22146.	1	04000
2447.	1	39935.	0	14711.	1	16850
2451.	1	38542.	0		1	29700
2452.	1	34035.	0	04789.	1	29700
2453.	1	34129.	0		1	42550
2454.	1	42059.	0	07304.	1	29700
2455.	1	43308.	0		1	42550
2456.	1	36573.	0	11931.	1	29700
2457.	1	30381.	0	13609.	1	29700
2458.	1	32291.	0	09233.	1	42550
2459.	1	37971.	0	21329.	1	29700
2460.	1	41080.	0	14261.	1	42550
2464.	1	38896.	0		1	55400
2465.	1	33298.	0	04630.	1	55400
2466.	1	33376.	0		1	68250
2467.	1	43438.	0	07117.	1	55400
2468.	1	44769.	0		1	68250
2469.	1	36798.	0	11562.	1	55400
2470.	1	29748.	0	13200.	1	55400
2471.	1	31597.	0	08946.	1	68250
2472.	1	38753.	0	20512.	1	55400
2473.	1	42225.	0	13810.	1	68250
2484.	1	51808.	0		1	04000
2487.	1	62152.	0	10628.	1	04000
2488.	1	62500.	0		1	16850
2489.	1	50236.	0	18073.	1	04000
2492.	1	59378.	0	31702.	1	04000
2493.	1	61110.	0	21210.	1	16850
2494.	1	45565.	0	35552.	1	04000
2496.	1	56963.	0	42058.	1	16850
2497.	1	52539.	0		1	29700
2500.	1	62152.	0	10630.	1	29700
2501.	1	62500.	0		1	42550
2502.	1	50809.	0	17848.	1	29700
2505.	1	59378.	0	31700.	1	29700
2506.	1	61110.	0	21210.	1	42550
2507.	1	45721.	0	34895.	1	29700
2509.	1	56963.	0	42058.	1	42550
2510.	1	53269.	0		1	55400
2513.	1	62152.	0	10632.	1	55400
2514.	1	62500.	0		1	68250
2515.	1	51381.	0	17623.	1	55400
2518.	1	59378.	0	31698.	1	55400
2519.	1	61110.	0	21211.	1	68250
2520.	1	45877.	0	34237.	1	55400
2522.	1	56963.	0	42058.	1	68250
2530.	1	87500.	0		1	04000
2533.	2	37500.	0		1	04000
2534.	2	12045.	0	13906.	1	04000
2535.	2	12500.	0		1	16850
2536.	2	61937.	0	17177.	1	04000
2537.	2	62500.	0		1	16850
2538.	1	85896.	0	24474.	1	04000
2541.	2	35468.	0	31000.	1	04000

2542,	2	08418,	0	41449,	1	04000
2543,	2	10682,	0	27737,	1	16850
2544,	2	57458,	0	51202,	1	04000
2545,	2	60254,	0	34263,	1	16850
2546,	1	81111,	0	48529,	1	04000
2548,	2	29407,	0	61470,	1	04000
2549,	2	05259,	0	54999,	1	16850
2550,	2	53556,	0	67940,	1	16850
2551,	1	87500,	0		1	29700
2554,	2	37500,	0		1	29700
2555,	2	12045,	0	13906,	1	29700
2556,	2	12500,	0		1	42550
2557,	2	61937,	0	17177,	1	29700
2558,	2	62500,	0		1	42550
2559,	1	85896,	0	24474,	1	29700
2562,	2	35468,	0	31000,	1	29700
2563,	2	08418,	0	41449,	1	29700
2564,	2	10682,	0	27737,	1	42550
2565,	2	57458,	0	51202,	1	29700
2566,	2	60254,	0	34263,	1	42550
2567,	1	81111,	0	48529,	1	29700
2569,	2	29407,	0	61470,	1	29700
2570,	2	05259,	0	54999,	1	42550
2571,	2	53556,	0	67940,	1	42550
2572,	1	87500,	0		1	55400
2575,	2	37500,	0		1	55400
2576,	2	12045,	0	13906,	1	55400
2577,	2	12500,	0		1	68250
2578,	2	61937,	0	17177,	1	55400
2579,	2	62500,	0		1	68250
2580,	1	85896,	0	24474,	1	55400
2583,	2	35468,	0	31000,	1	55400
2584,	2	08418,	0	41449,	1	55400
2585,	2	10682,	0	27737,	1	68250
2586,	2	57458,	0	51202,	1	55400
2587,	2	60254,	0	34263,	1	68250
2588,	1	81111,	0	48529,	1	55400
2590,	2	29407,	0	61470,	1	55400
2591,	2	05259,	0	54999,	1	68250
2592,	2	53556,	0	67940,	1	68250
2606,	0	23918,	0	08119,	1	04000
2608,	0	35880,	0	12180,	1	04000
2610,	0	29171,	0	12083,	1	04000
2611,	0	22653,	0	11171,	1	04000
2612,	0	22988,	0	09522,	1	16850
2613,	0	33984,	0	16759,	1	04000
2614,	0	34639,	0	14348,	1	16850
2615,	0	27344,	0	15787,	1	04000
2616,	0	21548,	0	12441,	1	16850
2617,	0	32470,	0	18746,	1	16850
2619,	0	23205,	0	07877,	1	29700
2621,	0	35125,	0	11924,	1	29700
2623,	0	28435,	0	11787,	1	29700
2624,	0	21978,	0	10838,	1	29700
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2626,	0	33269,	0	16406,	1	29700
2627,	0	33902,	0	14043,	1	42550
2628,	0	26673,	0	15400,	1	29700
2629,	0	20896,	0	12065,	1	42550
2630,	0	31779,	0	18348,	1	42550
2632,	0	22492,	0	07636,	1	55400
2634,	0	34371,	0	11668,	1	55400

2636,	0	27739,	0.	11490,	1.	55400
2637,	0	21303,	0.	10505,	1	55400
2638,	0	21597,	0.	08946,	1.	68250
2639,	0	32554,	0.	16053,	1.	55400
2640,	0.	33166,	0.	13738,	1	68250
2641,	0	26002,	0.	15012,	1	55400
2642,	0.	20245,	0.	11688,	1	68250
2643,	0	31089,	0.	17949,	1	68250
2655,	0.	59545,	0.	22127,	1.	04000
2657,	0.	83206,	0.	32104,	1.	04000
2659,	0	47056,	0.	20229,	1	04000
2662,	0.	71155,	0.	31686,	1	04000
2663,	0	58596,	0.	29728,	1	04000
2664,	0.	59058,	0.	25849,	1.	16850
2665,	0.	83203,	0.	42726,	1.	04000
2666,	0.	83477,	0.	37350,	1	16850
2667,	0	45412,	0.	26218,	1	04000
2669,	0.	70605,	0.	40764,	1	04000
2670,	0.	57968,	0.	33468,	1	16850
2671,	0	83466,	0	48189,	1	16850
2676,	0.	59444,	0.	21825,	1	29700
2678,	0	83760,	0	31758,	1.	29700
2680,	0.	46640,	0.	19968,	1.	29700
2683,	0	71380,	0.	31513,	1.	29700
2684,	0.	58507,	0.	29595,	1.	29700
2685,	0.	58963,	0.	25632,	1.	42550
2686,	0.	83740,	0.	42814,	1.	29700
2687,	0.	84023,	0.	37221,	1	42550
2689,	0.	45026,	0	25996,	1	29700
2690,	0	70829,	0.	40893,	1	29700
2691,	0	57887,	0.	33421,	1	42550
2692,	0	83994,	0.	48494,	1.	42550
2697,	0	59344,	0.	21524,	1.	55400
2699,	0	84315,	0.	31411,	1.	55400
2701,	0	46225,	0.	19707,	1	55400
2704,	0.	71606,	0.	31340,	1	55400
2705,	0.	58418,	0.	29462,	1	55400
2706,	0	58867,	0.	25415,	1.	68250
2707,	0	84277,	0.	42901,	1	55400
2708,	0	84569,	0.	37092,	1	68250
2709,	0.	44640,	0.	25773,	1.	55400
2711,	0.	71052,	0.	41022,	1	55400
2712,	0.	57806,	0.	33374,	1	68250
2713,	0	84522,	0.	48799,	1.	68250
2730,	0.	95782,	0.	40199,	1	04000
2732,	1.	10012,	0.	44303,	1.	04000
2734,	0.	89431,	0.	41710,	1.	04000
2737,	1	02890,	0	48383,	1	04000
2738,	0.	96345,	0.	50591,	1	04000
2739,	0	96203,	0.	45248,	1.	16850
2740,	1	10037,	0.	57126,	1.	04000
2741,	1.	10020,	0.	50512,	1.	16850
2742,	0.	89914,	0.	51912,	1	04000
2744,	1.	03338,	0.	59662,	1	04000
2745,	0.	96753,	0.	55860,	1	16850
2746,	1.	10040,	0.	63531,	1	16850
2751,	0	96074,	0.	39684,	1.	29700
2753,	1	10007,	0.	43702,	1.	29700
2755,	0.	89852,	0.	41494,	1	29700
2758,	1.	03076,	0.	48045,	1	29700
2759,	0.	96611,	0.	50517,	1	29700
2760,	0	96482,	0.	44954,	1.	42550

2761.	1. 10022.	0. 56918.	1. 29700
2762.	1. 10010.	0. 50108.	1. 42550
2763.	0. 90305.	0. 52138.	1. 29700
2765.	1. 03455.	0. 59730.	1. 29700
2766.	0. 97007.	0. 56007.	1. 42550
2767.	1. 10020.	0. 63520.	1. 42550
2772.	0. 96366.	0. 39170.	1. 55400
2774.	1. 10002.	0. 43101.	1. 55400
2776.	0. 90274.	0. 41278.	1. 55400
2779.	1. 03208.	0. 47687.	1. 55400
2780.	0. 96878.	0. 50443.	1. 55400
2781.	0. 96762.	0. 44659.	1. 68250
2782.	1. 10007.	0. 56710.	1. 55400
2783.	1. 10000.	0. 49703.	1. 68250
2784.	0. 90696.	0. 52363.	1. 55400
2786.	1. 03572.	0. 59797.	1. 55400
2787.	0. 97261.	0. 56154.	1. 68250
2788.	1. 10000.	0. 63508.	1. 68250
2805.	1. 21686.	0. 43135.	1. 04000
2807.	1. 32779.	0. 40124.	1. 04000
2809.	1. 15330.	0. 51329.	1. 04000
2812.	1. 25886.	0. 51563.	1. 04000
2813.	1. 19553.	0. 59958.	1. 04000
2814.	1. 21085.	0. 51645.	1. 16850
2815.	1. 28936.	0. 62126.	1. 04000
2816.	1. 31713.	0. 51226.	1. 16850
2817.	1. 14156.	0. 65908.	1. 04000
2819.	1. 22370.	0. 70650.	1. 04000
2820.	1. 18978.	0. 68692.	1. 16850
2821.	1. 27915.	0. 73852.	1. 16850
2826.	1. 22233.	0. 42840.	1. 29700
2828.	1. 33554.	0. 39525.	1. 29700
2830.	1. 15732.	0. 51205.	1. 29700
2833.	1. 26961.	0. 51696.	1. 29700
2834.	1. 20638.	0. 60382.	1. 29700
2835.	1. 21878.	0. 51697.	1. 42550
2836.	1. 30993.	0. 63011.	1. 29700
2837.	1. 33070.	0. 51357.	1. 42550
2838.	1. 14861.	0. 66315.	1. 29700
2840.	1. 24523.	0. 71893.	1. 29700
2841.	1. 20406.	0. 65 17.	1. 42550
2842.	1. 30793.	0. 75 14.	1. 42550
2847.	1. 22778.	0. 42581.	1. 55400
2849.	1. 34329.	0. 38927.	1. 55400
2851.	1. 16087.	0. 51074.	1. 55400
2854.	1. 28031.	0. 51829.	1. 55400
2855.	1. 21722.	0. 60840.	1. 55400
2856.	1. 22671.	0. 51750.	1. 68250
2857.	1. 33051.	0. 63895.	1. 55400
2858.	1. 34428.	0. 51488.	1. 68250
2859.	1. 15565.	0. 66722.	1. 55400
2861.	1. 26677.	0. 73137.	1. 55400
2862.	1. 21835.	0. 70342.	1. 68250
2863.	1. 33671.	0. 77175.	1. 68250
2879.	1. 53876.	0. 52234.	1. 04000
2881.	1. 40583.	0. 56672.	1. 04000
2884.	1. 45742.	0. 71872.	1. 04000
2885.	1. 50130.	0. 62186.	1. 16850
2886.	1. 33603.	0. 77136.	1. 04000
2888.	1. 40729.	0. 81250.	1. 16850
2892.	1. 53876.	0. 52236.	1. 29700
2894.	1. 41261.	0. 56738.	1. 29700

2897.	1	45743.	0.	71870.	1	29700
2898.	1	50130.	0	62186.	1.	42550
2899.	1	35042.	0	77966.	1	29700
2901.	1	40729.	0.	81250.	1	42550
2905.	1	53875.	0.	52238.	1	55400
2907.	1	41940.	0	56804.	1.	55400
2910.	1	45744.	0	71869.	1.	55400
2911.	1	50130.	0	62186.	1.	68250
2912.	1.	36481.	0.	78797.	1	55400
2914.	1.	40729.	0.	81250.	1.	68250
2926.	2.	01220.	0.	68313.	1	04000
2928.	2.	48566.	0.	84387.	1.	04000
2930.	1	73227.	0.	71753.	1	04000
2933.	2	19421.	0	90887.	1	04000
2934.	1.	90589.	0.	93980.	1.	04000
2935.	1.	96324.	0.	81320.	1.	16850
2936.	2	35433.	1.	16093.	1	04000
2937.	2	42518.	1	00454.	1	16850
2938.	1	62380.	0.	93750.	1	04000
2940.	2.	05681.	1.	18750.	1.	04000
2941.	1	84030.	1	06250.	1	16850
2942.	2	27332.	1	31250.	1.	16850
2947.	2	01220.	0	68313.	1.	29700
2949.	2	48566.	0	84387.	1	29700
2951.	1	73227.	0.	71753.	1	29700
2954.	2.	19421.	0.	90887.	1	29700
2955.	1	90589.	0.	93980.	1.	29700
2956.	1.	96324.	0.	81320.	1.	42550
2957.	2	35433.	1.	16093.	1.	29700
2958.	2	42518.	1.	00454.	1.	42550
2959.	1.	62380.	0.	93750.	1	29700
2961.	2.	05681.	1.	18750.	1.	29700
2962.	1.	84030.	1	06250.	1	42550
2963.	2.	27332.	1.	31250.	1.	42550
2968.	2	01220.	0.	68313.	1	55400
2970.	2	48566.	0.	84387.	1	55400
2972.	1	73227.	0.	71753.	1	55400
2975.	2	19421.	0.	90887.	1	55400
2976.	1.	90589.	0.	93980.	1	55400
2977.	1.	96324.	0.	81320.	1.	68250
2978.	2	35433.	1.	16093.	1.	55400
2979.	2	42518.	1.	00454.	1	68250
2980.	1.	62380.	0.	93750.	1	55400
2982.	2.	05681.	1.	18750.	1	55400
2983.	1	84030.	1.	06250.	1.	68250
2984.	2	27332.	1.	31250.	1.	68250
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2998.	0	27192.	0.	01783.	0	36000
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3002.	0.	33337.	0.	04389.	0	36000
3003.	0	26727.	0.	05315.	0	36000
3004.	0	26523.	0.	03492.	0	53000
3005.	0	39232.	0	07802.	0	36000
3006.	0	39135.	0.	05152.	0	53000
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3008.	0	25841.	0.	06924.	0.	53000
3009.	0	38128.	0.	10216.	0.	53000
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3011.	0	26198.	0.	01718.	0.	70000
3012.	0.	25756.	0.		0	87000

3013.	0.	38862.	0.	02548.	0	70000
3014.	0.	38418.	0		0	87000
3015.	0	32321.	0	04255.	0	70000
3016.	0.	25750.	0.	05121.	0	70000
3017.	0.	25536.	0.	03362.	0	87000
3018.	0.	38197.	0.	07597.	0	70000
3019.	0	38090.	0	05015.	0	87000
3020.	0	31489.	0.	08437.	0	70000
3021.	0.	24879.	0.	06666.	0.	87000
3022.	0.	37109.	0.	09943.	0.	87000
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3033.	0.	62500.	0.		0.	36000
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3037.	0.	70527.	0		0	53000
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3041.	0.	64698.	0.	12786.	0	36000
3042.	0.	57939.	0.	14908.	0.	36000
3043.	0.	56334.	0	10129.	0	53000
3044.	0.	76737.	0.	22218.	0	36000
3045.	0.	73533.	0.	15105.	0	53000
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3048.	0.	70946.	0.	23801.	0.	36000
3049.	0.	60108.	0.	19064.	0	53000
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3062.	0.	65169.	0	12448.	0	70000
3063.	0.	57865.	0.	14523.	0.	70000
3064.	0.	56299.	0.	09857.	0.	87000
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3066.	0.	74509.	0.	14700.	0.	87000
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3069.	0.	71251.	0.	23174.	0.	70000
3070.	0.	59972.	0	18555.	0	87000
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3084.	0.	86224.	0	23776.	0	36000
3085.	0.	87340.	0.	15136.	0	36000
3086.	0.	91083.	0.	18917.	0.	53000
3089.	0.	78935.	0.	12868.	0	36000
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3091.	0.	85285.	0.	10237.	0	53000
3094.	0.	76375.	0.		0.	36000
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3097.	0.	86948.	0.	23052.	0	70000
3098.	0	88173.	0	14593.	0.	70000
3099.	0.	91788.	0.	18212.	0.	87000
3102.	0.	79883.	0.	12475.	0.	70000
3103.	0.	84248.	0.	05115.	0	70000
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3122.	0	97132.	0	31065.	0	36000
3123.	0	94864.	0	22660.	0	36000
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3130.	1	10000.	0	32600.	0	70000
3131.	1	04883.	0	25757.	0	70000
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3133.	1	02412.	0	38201.	0	70000
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3464,	1	45743,	0.	71869,	0.	70000
3465,	1	50130,	0.	62186,	0.	87000
3466,	1	31699,	0.	76037,	0.	70000
3468,	1	40729,	0.	81250,	0.	87000
3476,	1	49875,	0.			0
3477,	1	37003,	0.	08234,	0	
3478,	1	37250,	0.			0 09000
3479,	1	62152,	0.	10634,	0.	
3480,	1	62500,	0.			0 09000
3481,	1	48687,	0.	18812,	0.	
3482,	1	35043,	0	24517,	0.	
3483,	1	36265,	0.	16413,	0.	09000
3484,	1	59379,	0.	31697,	0.	
3485,	1	61110,	0	21211,	0.	09000
3486,	1	45152,	0	37291,	0.	

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 2100, 2911, 2977, 2983, 2914  
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 2137, 2977, 2979, 2984, 2983  
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 3011, 2999, 3001, 3006, 3004  
 258, 615, 328, 331, 617, 621, 337, 340, 623, 3002, 3005, 3007, 3003, 3015, 3018, 3020,  
 3016, 3004, 3006, 3009, 3008  
 259, 619, 334, 337, 621, 625, 343, 346, 627, 3010, 3013, 3015, 3011, 2179, 2182, 2184,  
 2180, 3012, 3014, 3019, 3017  
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 2185, 3017, 3019, 3022, 3021  
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 3013, 3001, 3035, 3043, 3006

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 3055, 3035, 3037, 3045, 3043  
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 3018, 3006, 3043, 3049, 3009  
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 3063, 3043, 3045, 3050, 3049  
 265. 334, 335, 338, 337, 343, 344, 347, 346, 3051, 3055, 3059, 3013, 2225, 2229, 2233,  
 2182, 3014, 3056, 3064, 3019  
 266. 335, 336, 339, 338, 344, 345, 348, 347, 3054, 3057, 3062, 3055, 2228, 2231, 2236,  
 2229, 3056, 3058, 3066, 3064  
 267. 337, 338, 341, 340, 346, 347, 350, 349, 3059, 3063, 3067, 3018, 2233, 2237, 2241,  
 2187, 3019, 3064, 3070, 3022  
 268. 338, 339, 342, 341, 347, 348, 351, 350, 3062, 3065, 3069, 3063, 2236, 2239, 2243,  
 2237, 3064, 3066, 3071, 3070  
 269. 631, 333, 330, 633, 637, 342, 339, 639, 3084, 3044, 3089, 3085, 3097, 3065, 3102,  
 3098, 3086, 3050, 3045, 3091  
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 3103, 3091, 3045, 3037, 3095  
 271. 637, 342, 339, 639, 643, 351, 348, 645, 3097, 3065, 3102, 3098, 2300, 2239, 2305,  
 2301, 3099, 3071, 3066, 3104  
 272. 639, 339, 336, 641, 645, 348, 345, 647, 3102, 3057, 3107, 3103, 2305, 2231, 2310,  
 2306, 3104, 3066, 3058, 3108  
 273. 649, 381, 380, 651, 655, 390, 389, 657, 3117, 3120, 3122, 3118, 3130, 3133, 3135,  
 3131, 3119, 3121, 3126, 3124  
 274. 651, 380, 333, 631, 657, 389, 342, 637, 3122, 3125, 3084, 3123, 3135, 3138, 3097,  
 3136, 3124, 3126, 3050, 3086  
 275. 655, 390, 389, 657, 661, 399, 398, 663, 3130, 3133, 3135, 3131, 2346, 2349, 2351,  
 2347, 3132, 3134, 3139, 3137  
 276. 657, 389, 342, 637, 663, 398, 351, 643, 3135, 3138, 3097, 3136, 2351, 2354, 2300,  
 2352, 3137, 3139, 3071, 3099  
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 3164, 3152, 3154, 3159, 3157  
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 3169, 3157, 3159, 3121, 3119  
 279. 673, 417, 416, 675, 679, 426, 425, 681, 3163, 3166, 3168, 3164, 2392, 2395, 2397,  
 2393, 3165, 3167, 3172, 3170  
 280. 675, 416, 390, 655, 681, 425, 399, 661, 3168, 3171, 3130, 3169, 2397, 2400, 2346,  
 2398, 3170, 3172, 3134, 3132  
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 3196, 3184, 3186, 3191, 3189  
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 3201, 3189, 3191, 3154, 3152  
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 2439, 3197, 3199, 3204, 3202  
 284. 693, 694, 417, 673, 699, 700, 426, 679, 3200, 3203, 3163, 3201, 2443, 2446, 2392,  
 2444, 3202, 3204, 3167, 3165  
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 3198, 3186, 3219, 3224, 3191  
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 3203, 3191, 3224, 3227, 3154  
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 2441, 3199, 3232, 3237, 3204  
 288. 694, 712, 714, 417, 700, 718, 720, 426, 3233, 3236, 3238, 3203, 2489, 2492, 2494,  
 2446, 3204, 3237, 3240, 3167  
 289. 617, 331, 355, 723, 623, 340, 364, 729, 3007, 3251, 3253, 3249, 3020, 3264, 3266,  
 3262, 3008, 3009, 3257, 3255  
 290. 723, 355, 358, 725, 729, 364, 367, 731, 3253, 3256, 3258, 3254, 3266, 3269, 3271,  
 3267, 3255, 3257, 3260, 3259  
 291. 623, 340, 364, 729, 629, 349, 373, 735, 3020, 3264, 3266, 3262, 2189, 2608, 2610,  
 2606, 3021, 3022, 3270, 3268  
 292. 729, 364, 367, 731, 735, 373, 376, 737, 3266, 3269, 3271, 3267, 2610, 2613, 2615,  
 2611, 3268, 3270, 3273, 3272

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 3306, 3049, 3050, 3296, 3294  
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 3269, 3257, 3294, 3300, 3260  
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 3314, 3294, 3296, 3301, 3300  
 297, 340, 341, 365, 364, 349, 350, 374, 373, 3067, 3306, 3310, 3264, 2241, 2655, 2659,  
 2608, 3022, 3070, 3315, 3270  
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 2655, 3070, 3071, 3317, 3315  
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 2613, 3270, 3315, 3321, 3273  
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 2663, 3315, 3317, 3322, 3321  
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 3308, 3050, 3126, 3348, 3296  
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 3316, 3296, 3348, 3354, 3301  
 304, 383, 384, 387, 386, 392, 393, 396, 395, 3346, 3349, 3353, 3347, 3367, 3370, 3374,  
 3368, 3348, 3350, 3355, 3354  
 305, 342, 389, 392, 366, 351, 398, 401, 375, 3138, 3360, 3364, 3308, 2354, 2730, 2734,  
 2657, 3071, 3139, 3369, 3317  
 306, 389, 390, 393, 392, 398, 399, 402, 401, 3133, 3362, 3367, 3360, 2349, 2732, 2737,  
 2730, 3139, 3134, 3371, 3369  
 307, 366, 392, 395, 369, 375, 401, 404, 378, 3364, 3368, 3372, 3316, 2734, 2738, 2742,  
 2665, 3317, 3369, 3375, 3322  
 308, 392, 393, 396, 395, 401, 402, 405, 404, 3367, 3370, 3374, 3368, 2737, 2740, 2744,  
 2738, 3369, 3371, 3376, 3375  
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 3362, 3121, 3159, 3402, 3350  
 310, 407, 408, 411, 410, 416, 417, 420, 419, 3153, 3395, 3400, 3393, 3166, 3416, 3421,  
 3414, 3159, 3154, 3404, 3402  
 311, 384, 410, 413, 387, 393, 419, 422, 396, 3397, 3401, 3405, 3349, 3418, 3422, 3426,  
 3370, 3350, 3402, 3408, 3355  
 312, 410, 411, 414, 413, 419, 420, 423, 422, 3400, 3403, 3407, 3401, 3421, 3424, 3428,  
 3422, 3402, 3404, 3409, 3408  
 313, 390, 416, 419, 393, 399, 425, 428, 402, 3171, 3414, 3418, 3362, 2400, 2805, 2809,  
 2732, 3134, 3172, 3423, 3371  
 314, 416, 417, 420, 419, 425, 426, 429, 428, 3166, 3416, 3421, 3414, 2395, 2807, 2812,  
 2805, 3172, 3167, 3425, 3423  
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 2740, 3371, 3423, 3429, 3376  
 316, 419, 420, 423, 422, 428, 429, 432, 431, 3421, 3424, 3428, 3422, 2812, 2815, 2819,  
 2813, 3423, 3425, 3430, 3429  
 317, 408, 708, 742, 411, 417, 714, 748, 420, 3225, 3446, 3448, 3395, 3238, 3459, 3461,  
 3416, 3154, 3227, 3452, 3404  
 318, 411, 742, 744, 414, 420, 748, 750, 423, 3448, 3451, 3453, 3403, 3461, 3464, 3466,  
 3424, 3404, 3452, 3455, 3409  
 319, 417, 714, 748, 420, 426, 720, 754, 429, 3238, 3459, 3461, 3416, 2494, 2879, 2881,  
 2807, 3167, 3240, 3465, 3425  
 320, 420, 748, 750, 423, 429, 754, 756, 432, 3461, 3464, 3466, 3424, 2881, 2884, 2886,  
 2815, 3425, 3465, 3468, 3430  
 321, 757, 758, 760, 759, 763, 764, 766, 765, 3476, 3479, 3481, 3477, 3489, 3492, 3494,  
 3490, 3478, 3480, 3485, 3483  
 322, 759, 760, 762, 761, 765, 766, 768, 767, 3481, 3484, 3486, 3482, 3494, 3497, 3499,  
 3495, 3483, 3485, 3488, 3487  
 323, 763, 764, 766, 765, 685, 704, 706, 688, 3489, 3492, 3494, 3490, 3215, 3218, 3220,  
 3185, 3491, 3493, 3498, 3496

324, 765, 766, 768, 767, 688, 706, 708, 408, 3494, 3497, 3499, 3495, 3220, 3223, 3225,  
 3190, 3496, 3498, 3501, 3500  
 325, 761, 762, 778, 777, 767, 768, 784, 783, 3486, 3512, 3514, 3510, 3499, 3525, 3527,  
 3523, 3487, 3488, 3518, 3516  
 326, 777, 778, 780, 779, 783, 784, 786, 785, 3514, 3517, 3519, 3515, 3527, 3530, 3532,  
 3528, 3516, 3518, 3521, 3520  
 327, 767, 768, 784, 783, 408, 708, 742, 411, 3499, 3525, 3527, 3523, 3225, 3446, 3448,  
 3395, 3500, 3501, 3531, 3529  
 328, 783, 764, 786, 785, 411, 742, 744, 414, 3527, 3530, 3532, 3528, 3448, 3451, 3453,  
 3403, 3529, 3531, 3534, 3533  
 \*ELSET, ELSET=FSUR1, GENERATE  
 5, 8, 1  
 11, 12, 1  
 17, 20, 1  
 25, 28, 1  
 33, 36, 1  
 41, 44, 1  
 47, 48, 1  
 53, 56, 1  
 \*ELSET, ELSET=HOL13, GENERATE  
 29, 41, 4  
 30, 42, 4  
 \*ELSET, ELSET=HOL14, GENERATE  
 2, 8, 2  
 \*ELSET, ELSET=HOL16, GENERATE  
 1, 7, 2  
 9, 12, 1  
 21, 27, 2  
 \*ELSET, ELSET=FSUR2  
 59, 60, 71, 72, 75, 76, 79, 80, 83, 84, 99, 100  
 \*ELSET, ELSET=HOL2, GENERATE  
 57, 60, 1  
 69, 84, 1  
 97, 100, 1  
 \*ELSET, ELSET=HOL3, GENERATE  
 141, 142, 1  
 159, 177, 6  
 160, 178, 6  
 201, 202, 1  
 \*ELSET, ELSET=HOL4, GENERATE  
 139, 140, 1  
 157, 175, 6  
 158, 176, 6  
 199, 200, 1  
 \*ELSET, ELSET=HOL5, GENERATE  
 137, 138, 1  
 155, 173, 6  
 156, 174, 6  
 197, 198, 1  
 \*ELSET, ELSET=HOL6, GENERATE  
 259, 260, 1  
 271, 283, 4  
 272, 284, 4  
 291, 292, 1  
 \*ELSET, ELSET=HOL7, GENERATE  
 257, 258, 1  
 269, 281, 4  
 270, 282, 4  
 289, 290, 1  
 \*ELSET, ELSET=RSUR1, GENERATE  
 257, 258, 1  
 261, 264, 1

```

269, 281, 4
270, 282, 4
285, 286, 1
289, 290, 1
293, 296, 1
301, 304, 1
309, 312, 1
317, 318, 1
*ELSET, ELSET=FLNG1
323, 324, 327, 328
*ELSET, ELSET=FLNG2
321, 322, 325, 326
*ELSET, ELSET=RSUR2
321, 322, 325, 326
*INITIAL CONDITIONS, TYPE=TEMPERATURE
NALL, 70.
*RESTART, WRITE
*MATERIAL
*ELASTIC
15000000, 0, 0, 33, 70, 0
13400000, 0, 0, 33, 392, 0
12900000, 0, 0, 33, 752, 0
12400000, 0, 0, 33, 1112, 0
11900000, 0, 0, 33, 1472, 0
11500000, 0, 0, 33, 1832, 0
11000000, 0, 0, 33, 2192, 0
10500000, 0, 0, 33, 2552, 0
9000000, 0, 0, 33, 2912, 0
*CONDUCTIVITY
0, 000601, 0, 0
0, 000648, 900, 0
0, 000717, 1000, 0
0, 000741, 1500, 0
0, 000810, 2000, 0
0, 000879, 2500, 0
0, 000926, 3000, 0
*DENSITY
0, 31
*SPECIFIC HEAT
0, 075, 1000, 0
*STEP, INC=100
TRANSIENT HEAT TRANSFER ANALYSIS
*HEAT TRANSFER, TEMTOL=50, 0, DELMAX=500, 0, END=SS
0, 1, 0, 6, 0, 05, 0, 3, 10, 0
*FILM, OP=NEW
FSUR1, F2NU
HOL13, F3NU
HOL14, F4NU
HOL16, F6NU
FSUR2, F2NU
HOL2, F6NU
HOL3, F6NU
HOL4, F6NU
HOL5, F6NU
HOL6, F6NU
HOL7, F6NU
RSUR1, F1NU
FLNG1, F6NU
FLNG2, F6NU
RSUR2, F1NU
*NODE PRINT, FREQ=10
2, 2, 1, 1, 2, 2, 1, 1

```



\*NODE FILE, NSET=NALL  
2, 2, 1, 1, 2, 2, 1, 1  
\*END STEP

```

*HEADING
MACH 14 FLOW RESTRICTOR
TRANSIENT HEAT TRANSFER ANALYSIS
CONTINUATION OF M14FR401 RUN
*RESTART, READ, WRITE, STEP=1, INC=10, ENDSTEP
*STEP, INC=100
TRANSIENT HEAT TRANSFER ANALYSIS
*HEAT TRANSFER, TEMTOL=50. 0, DELMAX=500. 0, END=SS
0 1.2 5.0 0.05 0.3 10. 0
*FILM, OP=NEW
FSUR1, F2NU
HOL13, F3NU
HOL14, F4NU
HOL16, F6NU
FSUR2, F2NU
HOL2, F6NU
HOL3, F6NU
HOL4, F6NU
HOL5, F6NU
HOL6, F6NU
HOL7, F6NU
RSUR1, F1NU
FLNG1, F6NU
FLNG2, F6NU
RSUR2, F1NU
*NODE PRINT, FREQ=10
2, 2, 1, 1, 1, 1, 1, 1
*NODE FILE, NSET=NALL
2, 2, 1, 1, 1, 1, 1, 1
*END STEP

```

\*HEADING  
MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS  
CONTINUATION OF M14FR402 RUN  
\*RESTART, READ, WRITE, STEP=2, INC=11

APPENDIX F

PROCEDURE FILES TO RUN ABAQUS

```

COMMAND PROCEDURE TO RUN ABAQUS
$ INQUIRE IDENT "JOB IDENTIFIER"
$ INQUIRE DFILE "INPUT DATA FILE"
$ INQUIRE SUBFILE "USER SUBROUTINE FILE OR RETURN"
$ IF SUBFILE .EQS. "" THEN SUBFILE="9999"
$ INQUIRE RESIN "RESTART INPUT FILE OR RETURN"
$ IF RESIN .EQS. "" THEN RESIN="9999"
$ INQUIRE RESOUT "RESTART OUTPUT FILE OR RETURN"
$ IF RESOUT .EQS. "" THEN RESOUT="9999"
$ INQUIRE QUIT "RETURN if data check only, otherwise any symbol "
$ IF QUIT .EQS. "" THEN QUIT="9999"
$ SUBMIT/Q=SYS$LONG_BATCH/CPUTIME=INFINITE/PARAMETERS=('IDENT', 'DFILE', -
'SUBFILE', 'RESIN', 'RESOUT', 'QUIT') DUA0 [E]BECKER.ABAQUSJABAGUS.COM
$ EXIT

```

```

4K29ZISAF
PARAMETERS 'P1' JOB IDENTIFIER, MUST BE UNIQUE FROM OTHER
                        JOBS THAT MAY EXECUTE SIMULTANEOUSLY
                        'P2' ABAGUS DATA INPUT FILE
                        'P3' FORTRAN SOURCE CODE OF USER SUBROUTINES
                        'P4' RESTART READ FILE
                        'P5' OLD FILE IF THIS IS A RESTART READ RUN
                        'P6' SET TO NON-BLANK TO FINISH AFTER DATA CHECK
$ RENAME ABAGUS.LOG [EBECKER.ABAGUSJABAGUS.LOG
$ ASS _NLO_ SYS*PRINT
$ SET VERIFY
$ SET DEF DUAO: [EBECKER.ABAGUS]
$ ASS 'P1'.023 FOR023
$ ASS 'P1'.028 FOR028
$ ASS 'P1'.006 FOR006
$ ASS 'P1'.FIL FOR008
$ ASS 'P1'.PPL FOR077
$ IF P4.EQS. "9999" THEN GOTO B
$ ASS 'P4' FOR011
$ B
$ IF P5.EQS. "9999" THEN GOTO C
$ COPY 'P5' FOR008
$ C
$ ASS 'P1'.RES FOR012
$ ASS 'P1'.015 FOR015
$ ASS 'P1'.016 FOR016
$ ASS 'P1'.017 FOR017
$ ASS 'P1'.018 FOR018
$ ASS 'P2' FOR005
$ RUN ABAGUS*DIR.ABAGPRE
$ COPY 'P1'.006 'P1'.DAT
$ DELETE 'P1'.006;*
$ IF P6.EQS. "9999" THEN GOTO D
$ SHOW PROC/ACC
$ FOR 'P1'.028
$ IF P3.EQS. "9999" THEN GOTO A
$ FOR/OBJECT='P1'.OBJ 'P3'
$ APP 'P1'.OBJ 'P1'.OBJ
$ DELETE 'P1'.OBJ;*
$ DELETE 'P3'.LIS;*
$ A
$ ASS 'P1'.MPL FOR077
$ LINK/NOMAP/EXE='P1' 'P1'.ABAGUS*DIR.ABAGLIB/LIB
$ DELETE 'P1'.OBJ;*
$ DELETE 'P1'.LIS;*
$ RUN 'P1'
$ APP 'P1'.006 'P1'.DAT
$ DELETE 'P1'.EXE;*
$ DELETE 'P1'.006;*
$ D
$ DELETE 'P1'.023;*
$ DELETE 'P1'.028;*

```

APPENDIX G

RESULTS TRANSLATION FROM ABAQUS TO PATRAN-G FILES

```
$ INQUIRE TIT "File with title (or RETURN for TITLE.DAT)"
$ IF TIT.EQS. "" THEN TIT="[EBCRER RESULTS]TITLE.DAT"
$ INQUIRE TRANS "File with transformations (or RETURN for no transformations)"
$ IF TRANS.EQS. "" THEN TRANS="9999"
$ INQUIRE INP "File from ABAQUS run (FIL)"
$ SUBMIT/G=SYS$FAST_BATCH/CPUTIME=INFINITE/NOPRINTER/PARAMETERS=('TIT',-
'TRANS','INP') WRIT COM
```



```
4K25BEPUT
$ RENAME WRIT.LOG DUAO:[EBECKER RESULTS]* *
$ ASSIGN 'P1' FOR004
$ IF P2.EQS. "9999" THEN GOTO A
$ ASSIGN 'P2' FOR009
$ A:
$ ASSIGN 'P3' FOR008
$ SET DEF DUAO [EBECKER RESULTS]
$ RUN ABAPAT
```

```

PROGRAM ABAPAT
DOUBLE PRECISION ARRAY
LOGICAL TRANS1, TRANS2, CYLIN
REAL MAXDEF, LAMBDAX, LAMBDAY, LAMBDZ, MUX, MUY, MUZ, NUX, NUY, NUZ
DIMENSION ARRAY(513), JRRAY(2, 513), TITLE(80), NCARDS(200),
+ NDMAX(200), INODE(4000), STITLE1(80), STITLE2(80), MAXDEF(200),
+ WRIT(4000, 60), NODTRAN(9999), NODE(9999), XDRG(9999), YDRG(9999),
+ ZDRG(9999)
EQUIVALENCE (ARRAY(1), JRRAY(1, 1))

```

```

C *****
C *
C * Latest revision : April 26, 1984
C *
C * This program is an ABAQUS-to-PATRAN results translator.
C * Nodal results (only), produced by *EL FILE or *NODE FILE cards
C * in ABAQUS, are translated into PATRAN post-processing format.
C *
C * INITF and DBFILE are subroutines in the ABAQUS library--this
C * code is linked with ABAQUS*DIR.ABAQLIB/LIB to produce the
C * executable. The ABAQUS output file must be located on UNIT 8
C * to be accessed by the ABAQUS subroutines.
C *
C * A three-record file, containing a title and two subtitles, must
C * be located on UNIT 4.
C *
C *****
C
C *****
C *
C * VARIABLE DEFINITIONS
C *
C * 'ARRAY' is a single record from the ABAQUS output file
C *
C * NU is the number of data blocks in the ABAQUS output file.
C * NCARDS is the number of records in each data block.
C * NNODES is the number of nodes in each data block.
C * NDMAX is the node having the largest deflection.
C * MAXNOD is the highest node ID.
C * MAXDEF is the largest deflection (occurring at NDMAX).
C *
C * WRIT is the array of nodal results which have been translated
C * into PATRAN postprocessing format. A separate file is
C * produced for each increment, each is output on UNIT 10
C * In other words, there will be a separate FOR010.DAT output
C * by this program for every increment in the results file from
C * ABAQUS; the output files will be distinguishable on the basis
C * of version number.
C *
C *****
C
C *****
C *
C * Determine NU, NNODES, and MAXNOD
C *
C *****
C
CALL INITF
MAXNOD=0
NU=0

```

```

      NNODES=0
      I2001=0
      NWIDTH=59
      DO 10 K=1,99999
      CALL DBFILE(0,ARRAY,JCRD)
      IF (JCRD.NE.0) GO TO 20
      IF (JRRAY(1,2).EQ.1901) THEN
      NNODES=NNODES+1
      NODE(JRRAY(1,3)) = JRRAY(1,3)
      XORG(JRRAY(1,3)) = ARRAY(4)
      YORG(JRRAY(1,3)) = ARRAY(5)
      ZORG(JRRAY(1,3)) = ARRAY(6)
      ENDIF
      IF (JRRAY(1,2).EQ.2001) NU=NU+1
      IF (JRRAY(1,2).EQ.1901.AND.JRRAY(1,3)
+      .GT.MAXNOD)MAXNOD=JRRAY(1,3)
10      CONTINUE
20      REWIND B
C
C *****
C *
C *      Determine MAXDEF, NDMAX, NCARDS
C *
C *****
C
      DO 30 K=1,NU
      MAXDEF(K)=0.0
      DO 25 J=1,99999
      ARRAY(4)=0.0
      ARRAY(5)=0.0
      ARRAY(6)=0.0
      CALL DBFILE(0,ARRAY,JCRD)
      IF (JCRD.NE.0) GO TO 35
      IF (JRRAY(1,2).EQ.2001) GO TO 23
      IF (JRRAY(1,2).NE.101) GO TO 25
      CALL DEFLECTION (ARRAY,DEFMAX)
      IF (ABS(DEFMAX).GT.ABS(MAXDEF(K))) GO TO 22
      GO TO 25
22      MAXDEF(K)=DEFMAX
      NDMAX(K)=JRRAY(1,3)
      GO TO 25
23      NCARDS(K)=J
      GO TO 30
25      CONTINUE
30      CONTINUE
35      REWIND B
C
C *****
C *
C *      Assign ABAGUS output quantities to appropriate locations
C *      in WRIT.
C *
C *****
C
      TRANS1=.FALSE.
      TRANS2=.FALSE.
      READ(4,1000)TITLE
      READ(4,1000)STITLE1
      READ(4,1000)STITLE2
      READ(4,1010,END=7)TRANS1
      IF(TRANS1)THEN
      READ(9,1050) NUMNODE

```

```

DO 5 II=1,4000,15
  READ(9,1040,ERR=6) (NODTRAN(K),K=II,II+14)
5  CONTINUE
6  XZCOS=0.0
  YZCOS=0.0
  ZXCS=0.0
  ZYCS=0.0
  ZZCOS=1.0
  ENDIF
7  CONTINUE
  DO 50 J=9,(NU+8)
  DO 40 K=1,NCARDS(J-8)
  DO 42 MM=4,10
  ARRAY(MM)=0.0
42 CONTINUE
  CALL DBFILE(0,ARRAY,JCRD)
  IF (JCRD.NE.0) GO TO 60
  IF (JRRAY(1,2).EQ.2001) I2001=I2001+1
  IF (I2001.LE.1 AND JRRAY(1,2).EQ.2001) GO TO 50
  IF (JRRAY(1,2).EQ.1901) INODE(JRRAY(1,3))=JRRAY(1,3)
C *****
C *
C *   THIS TRANSFORMATION ASSUMES A CYLINDRICAL COORDINATE
C *   TRANSFORMATION. THE Z-AXIS REMAINS THE SAME FOR BOTH
C *   THE ORIGINAL SYSTEM AND THE TRANSFORMED SYSTEM. ALSO,
C *   THE ORIGIN NEVER MOVES.
C *
C *****
C
  IF (TRANS1.AND.(JRRAY(1,2).EQ.101.OR JRRAY(1,2).EQ.102 OR
+   JRRAY(1,2).EQ.103)) THEN
  DO 71 IK=1,NUMNODE
  IF (JRRAY(1,3).EQ.NODTRAN(IK)) THEN
  TRANS2=.TRUE.
  R=(XORG(NODTRAN(IK))*2.0+YORG(NODTRAN(IK))*2.0)**0.5
  XXCOS=XORG(NODTRAN(IK))/R
  XYCOS=-YORG(NODTRAN(IK))/R
  YXCOS=YORG(NODTRAN(IK))/R
  YYCOS=XORG(NODTRAN(IK))/R
  GO TO 72
  ENDIF
71 CONTINUE
  TRANS2=.FALSE.
  ENDIF
72 CONTINUE
  IF (JRRAY(1,2).EQ.101) GO TO 102
  IF (JRRAY(1,2).EQ.51) GO TO 104
  IF (JRRAY(1,2).EQ.54) GO TO 106
  IF (JRRAY(1,2).EQ.52) GO TO 108
  IF (JRRAY(1,2).EQ.55) GO TO 110
  IF (JRRAY(1,2).EQ.56) GO TO 112
  IF (JRRAY(1,2).EQ.57) GO TO 114
  IF (JRRAY(1,2).EQ.58) GO TO 116
  IF (JRRAY(1,2).EQ.102) GO TO 118
  IF (JRRAY(1,2).EQ.103) GO TO 120
  IF (JRRAY(1,2).EQ.104) GO TO 122
  IF (JRRAY(1,2).EQ.106) GO TO 124
  IF (JRRAY(1,2).EQ.201) GO TO 126
  IF (JRRAY(1,2).EQ.204) GO TO 128
  IF (JRRAY(1,2).EQ.206) GO TO 130
  IF (JRRAY(1,2).EQ.214) GO TO 132

```

```

      GO TO 40
C
C *****
C *
C *   Displacements
C *
C *****
C
102  IF(TRANS2)GO TO 103
      WRIT(JRRAY(1,3),2)=ARRAY(4)
      WRIT(JRRAY(1,3),3)=ARRAY(5)
      WRIT(JRRAY(1,3),4)=ARRAY(6)
      GO TO 40
103  WRIT(JRRAY(1,3),2)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),3)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),4)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   Stresses
C *
C *****
C
104  WRIT(JRRAY(1,3),5)=ARRAY(5)
      WRIT(JRRAY(1,3),6)=ARRAY(6)
      WRIT(JRRAY(1,3),7)=ARRAY(7)
      WRIT(JRRAY(1,3),8)=ARRAY(8)
      WRIT(JRRAY(1,3),9)=ARRAY(9)
      WRIT(JRRAY(1,3),10)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),8)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),8).EQ.ARRAY(7))WRIT(JRRAY(1,3),7)=0.0
      GO TO 40
C
C *****
C *
C *   Principle stresses, stress invariants
C *
C *****
C
106  WRIT(JRRAY(1,3),11)=ARRAY(5)
      WRIT(JRRAY(1,3),12)=ARRAY(6)
      WRIT(JRRAY(1,3),13)=ARRAY(7)
      WRIT(JRRAY(1,3),14)=ARRAY(8)
      WRIT(JRRAY(1,3),15)=ARRAY(9)
      WRIT(JRRAY(1,3),16)=ARRAY(10)
      GO TO 40
C
C *****
C *
C *   Strains
C *
C *****
C
108  WRIT(JRRAY(1,3),17)=ARRAY(5)
      WRIT(JRRAY(1,3),18)=ARRAY(6)
      WRIT(JRRAY(1,3),19)=ARRAY(7)
      WRIT(JRRAY(1,3),20)=ARRAY(8)
      WRIT(JRRAY(1,3),21)=ARRAY(9)
      WRIT(JRRAY(1,3),22)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),20)=ARRAY(7)

```

```

      IF(WRIT(JRRAY(1,3),20).EQ.ARRAY(7))WRIT(JRRAY(1,3),19)=0.0
      GO TO 40
C
C *****
C *
C *   Plastic strains
C *
C *****
C
110  WRIT(JRRAY(1,3),23)=ARRAY(5)
      WRIT(JRRAY(1,3),24)=ARRAY(6)
      WRIT(JRRAY(1,3),25)=ARRAY(7)
      WRIT(JRRAY(1,3),26)=ARRAY(8)
      WRIT(JRRAY(1,3),27)=ARRAY(9)
      WRIT(JRRAY(1,3),28)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+    WRIT(JRRAY(1,3),26)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),26).EQ.ARRAY(7))WRIT(JRRAY(1,3),25)=0.0
      GO TO 40
C
C *****
C *
C *   Creep strains
C *
C *****
C
112  WRIT(JRRAY(1,3),29)=ARRAY(5)
      WRIT(JRRAY(1,3),30)=ARRAY(6)
      WRIT(JRRAY(1,3),31)=ARRAY(7)
      WRIT(JRRAY(1,3),32)=ARRAY(8)
      WRIT(JRRAY(1,3),33)=ARRAY(9)
      WRIT(JRRAY(1,3),34)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+    WRIT(JRRAY(1,3),32)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),32).EQ.ARRAY(7))WRIT(JRRAY(1,3),31)=0.0
      GO TO 40
C
C *****
C *
C *   Inelastic strains
C *
C *****
C
114  WRIT(JRRAY(1,3),35)=ARRAY(5)
      WRIT(JRRAY(1,3),36)=ARRAY(6)
      WRIT(JRRAY(1,3),37)=ARRAY(7)
      WRIT(JRRAY(1,3),38)=ARRAY(8)
      WRIT(JRRAY(1,3),39)=ARRAY(9)
      WRIT(JRRAY(1,3),40)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+    WRIT(JRRAY(1,3),38)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),38).EQ.ARRAY(7))WRIT(JRRAY(1,3),37)=0.0
      GO TO 40
C
C *****
C *
C *   Elastic strains
C *
C *****
C
116  WRIT(JRRAY(1,3),41)=ARRAY(5)
      WRIT(JRRAY(1,3),42)=ARRAY(6)

```

```

      WRIT(JRRAY(1,3),43)=ARRAY(7)
      WRIT(JRRAY(1,3),44)=ARRAY(8)
      WRIT(JRRAY(1,3),45)=ARRAY(9)
      WRIT(JRRAY(1,3),46)=ARRAY(10)
      IF(ARRAY(8).EQ.0.0.AND.ARRAY(9).EQ.0.0.AND.ARRAY(10).EQ.0.0)
+ WRIT(JRRAY(1,3),44)=ARRAY(7)
      IF(WRIT(JRRAY(1,3),44).EQ.ARRAY(7))WRIT(JRRAY(1,3),43)=0.0
      GO TO 40
C
C *****
C *
C *   Velocities
C *
C *****
C
118   IF(TRANS2)GO TO 119
      WRIT(JRRAY(1,3),47)=ARRAY(4)
      WRIT(JRRAY(1,3),48)=ARRAY(5)
      WRIT(JRRAY(1,3),49)=ARRAY(6)
      GO TO 40
119   WRIT(JRRAY(1,3),47)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),48)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),49)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   Accelerations
C *
C *****
C
120   IF(TRANS2)GO TO 121
      WRIT(JRRAY(1,3),50)=ARRAY(4)
      WRIT(JRRAY(1,3),51)=ARRAY(5)
      WRIT(JRRAY(1,3),52)=ARRAY(6)
      GO TO 40
121   WRIT(JRRAY(1,3),50)=XXCOS*ARRAY(4)+XYCOS*ARRAY(5)+XZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),51)=YXCOS*ARRAY(4)+YYCOS*ARRAY(5)+YZCOS*ARRAY(6)
      WRIT(JRRAY(1,3),52)=ZXCOS*ARRAY(4)+ZYCOS*ARRAY(5)+ZZCOS*ARRAY(6)
      GO TO 40
C
C *****
C *
C *   The remaining nodal quantities
C *
C *****
C
122   WRIT(JRRAY(1,3),53)=ARRAY(4)
      WRIT(JRRAY(1,3),54)=ARRAY(5)
      WRIT(JRRAY(1,3),55)=ARRAY(6)
      GO TO 40
124   WRIT(JRRAY(1,3),56)=ARRAY(4)
      GO TO 40
126   WRIT(JRRAY(1,3),57)=ARRAY(4)
      GO TO 40
128   WRIT(JRRAY(1,3),58)=ARRAY(4)
      GO TO 40
130   WRIT(JRRAY(1,3),59)=ARRAY(4)
      GO TO 40
132   WRIT(JRRAY(1,3),60)=ARRAY(4)
40    CONTINUE
C

```

```

C *****
C *
C *   Write output to PATRAN nodal results file(s) *
C *
C *****
41  OPEN(UNIT=10, STATUS='NEW', FORM='UNFORMATTED')
    WRITE (10) TITLE, NNODES, MAXNOD, MAXDEF(J-8), NDMAX(J-8), NWIDTH
    WRITE (10) STITLE1
    WRITE (10) STITLE2
    DO 47 JK=1, MAXNOD
      IF (INODE(JK).EQ.0) GO TO 47
      WRITE (10) INODE(JK), (WRIT(JK, KK), KK=2, 60)
47  CONTINUE
    CLOSE(UNIT=10)
50  CONTINUE
1000 FORMAT (80A1)
1010 FORMAT (L2)
1020 FORMAT (3F8.3)
1030 FORMAT (4X, I4, 3(2X, F7.5))
1040 FORMAT (15(I6))
1050 FORMAT (I4)
60  END
C
C
C   SUBROUTINE DEFLECTION (ARRAY, DEFMAX)
C
C *****
C *
C *   Determine the maximum deflection at a node. *
C *
C *****
C
    DIMENSION ARRAY(513)
    DOUBLE PRECISION ARRAY
    IF (ABS(ARRAY(4)).GT.ABS(ARRAY(5))) GO TO 10
    GO TO 20
10  IF (ABS(ARRAY(4)).GT.ABS(ARRAY(6))) GO TO 30
    DEFMAX=ARRAY(6)
    GO TO 50
20  IF (ABS(ARRAY(5)).GT.ABS(ARRAY(6))) GO TO 40
    DEFMAX=ARRAY(6)
    GO TO 50
30  DEFMAX=ARRAY(4)
    GO TO 50
40  DEFMAX=ARRAY(5)
50  RETURN
    END

```



MACH 14 FLOW RESTRICTOR  
THERMAL STRESS ANALYSIS  
DISPLACEMENTS OF NODES --- PRESSURE LOAD ONLY  
TRUE

472	61	62	63	70	71	72	79	80	81	89	90	98	99	107	108
116	117	125	126	134	135	136	142	143	144	151	152	153	160	161	162
223	224	225	232	233	234	235	251	252	260	261	278	279	287	288	304
305	306	313	314	315	358	359	359	360	367	368	369	376	377	378	386
387	395	396	404	405	413	414	414	422	423	431	432	581	587	593	725
731	737	744	750	756	779	780	780	785	786	947	948	953	954	971	972
977	978	1073	1074	1082	1083	1109	1110	1110	1118	1119	1145	1154	1172	1173	1181
1182	1190	1191	1358	1359	1360	1361	1362	1362	1379	1380	1381	1382	1383	1394	1395
1412	1414	1415	1416	1433	1435	1436	1437	1437	1448	1449	1466	1468	1469	1470	1487
1489	1490	1491	1502	1503	1514	1516	1527	1527	1529	1536	1553	1555	1556	1557	1574
1576	1577	1578	1589	1590	1907	1908	1909	1909	1920	1921	1922	1929	1946	1948	1949
1950	1967	1969	1970	1971	2000	2002	2003	2003	2004	2021	2023	2024	2025	2054	2056
2057	2058	2075	2077	2078	2079	2102	2104	2104	2115	2117	2141	2143	2144	2145	2162
2164	2165	2166	2615	2616	2617	2628	2629	2629	2630	2641	2642	2643	2667	2669	2670
2671	2688	2690	2691	2692	2709	2711	2712	2712	2713	2742	2744	2745	2746	2763	2765
2766	2767	2784	2786	2787	2788	2817	2819	2819	2820	2821	2838	2840	2841	2842	2859
2861	2862	2863	2886	2888	2899	2901	2912	2912	2914	2938	2940	2941	2942	2959	2961
2962	2963	2980	2982	2983	2984	3258	3259	3259	3260	3271	3272	3273	3297	3299	3300
3301	3318	3320	3321	3322	3351	3353	3354	3354	3355	3372	3374	3375	3376	3405	3407
3408	3409	3426	3428	3429	3430	3453	3455	3455	3466	3468	3519	3520	3521	3532	3533
30	33	36	39	42	45	48	51	51	54	141	144	150	153	159	162
192	195	198	201	204	207	303	306	306	312	315	704	706	708	710	712
714	716	718	720	742	744	748	750	750	754	756	758	760	762	764	766
768	778	780	784	786	1023	1026	1029	1029	1032	1035	1038	1041	1044	1047	1170
1173	1179	1182	1188	1191	1294	1295	1302	1302	1303	1308	1315	1316	1323	1324	1329
1334	1339	1543	1551	1552	1557	1564	1572	1572	1573	1578	1583	1588	1849	1850	1857
1858	1863	1870	1871	1878	1879	1884	2131	2131	2139	2140	2145	2152	2160	2161	2166
2487	2492	2536	2537	2544	2545	2550	2557	2557	2558	2565	2566	2571	2578	2579	2586
2587	2592	2879	2884	2928	2936	2937	2942	2942	2949	2957	2958	2963	2970	2978	2979
2984	3218	3219	3223	3224	3227	3231	3232	3232	3236	3237	3240	3446	3451	3452	3455
3459	3464	3465	3468	3479	3480	3484	3485	3485	3488	3492	3493	3497	3498	3501	3512
3517	3518	3521	3525	3530	3531	3534									

APPENDIX H

ABAQUS HEAT TRANSFER ANALYSIS RESULTS

ABAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE22-FEB-84  
TIME18 05 51  
PAGE 1  
STEP 1 INCREMENT 1

STEP 1 TRANSIENT HEAT TRANSFER ANALYSIS

THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02

THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300

THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500

THE CONVERGENCE TOLERANCE MEASURES ARE -

TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0

THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE

CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0

MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100

MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

INCREMENT NUMBER 1 ATTEMPT NUMBER 1

TIME INCREMENT = 0.100

MAXIMUM TEMPERATURE CHANGE IN THIS INCREMENT IS 526 AND OCCURS AT NODE 537

THIS EXCEEDS THE TOLERANCE SPECIFIED

THE INCREMENT WILL BE RECYCLED WITH A TIME INCREMENT OF 5.701E-02

ABRAGUS VERSION 4-4-67

DATE 22-FEB-84 TIME 18 05 51 PAGE 2

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 1 INCREMENT 1

INCREMENT NUMBER 1 ATTEMPT NUMBER 2  
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -20.5 AND OCCURS AT NODE 1274

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 5.701E-02. TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 9.502E-02  
TOTAL ACCUMULATED TIME IS 5.701E-02  
TOTAL HEAT TIME IS 5.701E-02

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 1

INCREMENT NUMBER 2 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -48.0 AND OCCURS AT NODE 1236

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.114. TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.190  
TOTAL ACCUMULATED TIME IS 0.114  
TOTAL HEAT TIME IS 0.114

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 2

ABAQUS VERSION 4-4-67

DATE 22-FEB-84      TIME 18 05:51      PAGE 3

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 1 INCREMENT 3

INCREMENT NUMBER 3 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -64.0 AND OCCURS AT NODE 1417  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 1.24 AND OCCURS AT NODE 1236

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.171      TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.285  
TOTAL ACCUMULATED TIME IS 0.171  
TOTAL HEAT TIME IS 0.171

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 3

INCREMENT NUMBER 4 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -75.5 AND OCCURS AT NODE 1236  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 1.84 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.228      TIME INCREMENT COMPLETED IS 5.701E-02. FRACTION OF STEP IS 0.380  
TOTAL ACCUMULATED TIME IS 0.228  
TOTAL HEAT TIME IS 0.228

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 4

ABAQUS VERSION 4-4-67

DATE22-FEB-84 TIME18:05 51 PAGE 4

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 1 INCREMENT 4

INCREMENT NUMBER 5 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -77.4 AND OCCURS AT NODE 1417  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2.82 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.285 , TIME INCREMENT COMPLETED IS 5.701E-02, FRACTION OF STEP IS 0.475  
TOTAL ACCUMULATED TIME IS 0.285  
TOTAL HEAT TIME IS 0.285

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 5

INCREMENT NUMBER 6 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -90.8 AND OCCURS AT NODE 1417  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2.81 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.342 , TIME INCREMENT COMPLETED IS 5.701E-02, FRACTION OF STEP IS 0.570  
TOTAL ACCUMULATED TIME IS 0.342  
TOTAL HEAT TIME IS 0.342

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 6

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE 22-FEB-84      TIME 19 05 51      PAGE 5  
STEP 1 INCREMENT 6INCREMENT NUMBER 7 ATTEMPT NUMBER 1  
TIME INCREMENT = 5 701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -103 AND OCCURS AT NODE 1236  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 2 48 AND OCCURS AT NODE 1586

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0 399 . TIME INCREMENT COMPLETED IS 5 701E-02, FRACTION OF STEP IS 0 665  
TOTAL ACCUMULATED TIME IS 0 399  
TOTAL HEAT TIME IS 0 399

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 7

INCREMENT NUMBER 8 ATTEMPT NUMBER 1  
TIME INCREMENT = 5 701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -106 AND OCCURS AT NODE 1216  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2 77 AND OCCURS AT NODE 1421

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0 436 . TIME INCREMENT COMPLETED IS 5 701E-02, FRACTION OF STEP IS 0 760  
TOTAL ACCUMULATED TIME IS 0 436  
TOTAL HEAT TIME IS 0 436

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 8



ABRAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE 22-FEB-84      TIME 18 05 51      PAGE 6  
STEP 1      INCREMENT 8INCREMENT NUMBER 9      ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -89.8      AND OCCURS AT NODE 1401  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2.05      AND OCCURS AT NODE 1423

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.513      TIME INCREMENT COMPLETED IS 5.701E-02,      FRACTION OF STEP IS 0.835  
TOTAL ACCUMULATED TIME IS 0.513  
TOTAL HEAT TIME IS 0.513

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 9

INCREMENT NUMBER 10      ATTEMPT NUMBER 1  
TIME INCREMENT = 5.701E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 43.1      AND OCCURS AT NODE 1322

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.570      TIME INCREMENT COMPLETED IS 5.701E-02,      FRACTION OF STEP IS 0.950  
TOTAL ACCUMULATED TIME IS 0.570  
TOTAL HEAT TIME IS 0.570

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

DATE22-FEB-84

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STEP 1 INCREMENT 10

## NODE POINT OUTPUT SET ALL

## TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	2752	2	518.9	3	2766	4	2751	5	449.9		
6	2767	7	2749	8	419.9	9	2755	10	2803		
11	796.9	12	2819	13	2805	14	716.0	15	2817		
16	2822	17	668.9	18	2814	19	2937	20	2360		
21	2939	22	2942	23	2333	24	2938	25	2966		
26	2316	27	2929	28	380.6	29	101.0	30	67.19		
31	272.2	32	89.47	33	67.57	34	115.5	35	77.53		
36	64.36	37	565.9	38	159.4	39	106.2	40	418.2		
41	141.0	42	108.0	43	215.7	44	111.5	45	111.7		
46	2251	47	2136	48	2112	49	2318	50	2128		
51	2113	52	2178	53	2116	54	2115	58	2746		
59	322.7	60	1075	61	2741	62	305.5	63	581.6		
67	2819	68	512.6	69	1364	70	2821	71	473.7		
72	805.3	76	2964	77	2259	78	2440	79	2970		
80	2256	81	2282	83	2765	84	2754	86	882.8		
87	590.8	89	423.3	90	227.9	92	2808	93	2802		
95	1165	96	832.6	98	615.3	99	343.6	101	2924		
102	2927	104	2392	105	2316	107	2255	108	2188		
110	2763	111	2726	113	359.3	114	193.3	116	131.4		
117	96.22	119	2801	120	2820	122	541.4	123	348.9		
125	195.0	126	136.6	128	2923	129	2962	131	2258		
132	2206	134	2142	135	2122	139	80.27	140	71.48		
141	67.68	142	73.35	143	69.14	144	68.63	148	135.9		
149	110.8	150	110.7	151	115.4	152	112.6	153	109.9		
157	2120	158	2116	159	2114	160	2115	161	2114		
162	2114	163	1082	164	281.7	165	1085	166	1079		
167	256.7	168	1081	169	1070	170	237.8	171	1081		
172	1473	173	360.5	174	1459	175	1474	176	320.8		
177	1453	178	1472	179	301.6	180	1459	190	199.3		
191	79.11	192	70.86	193	159.8	194	75.96	195	70.86		
196	95.29	197	73.65	198	69.78	199	274.9	200	88.05		
201	69.96	202	201.9	203	81.60	204	69.89	205	100.2		

ABAQUS VERSION 4-4-67										DATE22-FEB-84			TIME18 05.51			PAGE 8		
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			1 INCREMENT			10		
206	72.70	207	69.63	220	1065	221	182.3	222	468.8									
223	1060	224	177.5	225	280.2	229	1465	230	235.6									
231	704.5	232	1462	233	211.7	234	412.3	245	1083.									
246	1078.	248	403.3	249	291.6	251	213.7	252	130.5									
255	1455.	255	1444	257	588.1	258	410.6	260	309.5									
261	177.6	272	1084.	273	1048.	275	205.5	276	130.4									
278	87.80	279	77.19	281	1452.	282	1456.	284	255.4									
285	164.0	287	108.2	288	85.02	301	72.08	302	71.69									
303	69.81	304	72.68	305	70.33	306	70.45	310	82.55									
311	70.42	312	70.49	313	71.94	314	71.27	315	70.09									
325	2181	326	2000.	327	2180.	328	2183	329	1989									
330	2178.	331	2187.	332	1984.	333	2174.	334	944.5									
335	309.2	336	948.6	337	943.1	338	278.5	339	943.6									
340	940.5	341	264.7	342	940.7	343	905.8	344	236.0									
345	913.5	346	902.7	347	210.1	348	909.9	349	895.9									
350	198.3	351	907.0	355	2187.	356	1964.	357	2024.									
358	2187.	359	1964.	360	1981.	364	939.0	365	215.1									
366	447.6	367	935.6	368	211.8	369	300.8	373	893.1									
374	155.5	375	388.0	376	888.5	377	153.7	378	238.8									
380	2176.	381	2184	383	2014.	384	2010.	386	1975.									
387	2008.	389	943.1	390	934.3	392	935.1	393	282.9									
395	248.7	396	147.7	398	910.7	399	906.3	401	333.2									
402	234.3	404	187.6	405	117.4	407	2280.	408	2616.									
410	2078.	411	2556.	413	2127.	414	2545.	416	1066.									
417	930.9	419	226.0	420	211.7	422	102.0	423	134.5									
425	1020	426	904.3	428	194.6	429	145.9	431	91.44									
432	86.71	433	2743.	435	2748.	439	2790.	441	2791.									
445	2927.	447	2927.	469	2911.	471	2912.	473	2911.									
475	2936.	477	2936.	479	2938.	481	2968.	483	2968.									
485	2967.	487	2910.	489	2910.	491	2910.	493	2933.									
495	2931.	497	2933.	499	2961.	501	2959.	503	2961.									
505	2910.	507	2910.	511	2933.	513	2929.	517	2962.									
519	2961.	523	2912.	525	2910.	529	2940.	531	2931.									
535	2967.	537	2963	541	2911.	542	1072.	543	2911.									
544	1075.	547	2935.	548	1442.	549	2936.	550	1448.									
553	2965.	555	2967.	559	2911.	581	2911.	585	2940.									
587	2940.	591	2967.	593	2964.	613	2943.	615	2943.									
617	2941.	619	2881.	621	2881.	623	2880.	625	2884.									
627	2884.	629	2883.	631	2942.	633	2942.	635	2942.									
637	2880.	639	2880.	641	2880.	643	2883.	645	2883.									
647	2883.	649	2940.	651	2943.	655	2878.	657	2881.									
661	2882.	663	2884.	667	2940.	669	2942.	673	2870.									
675	2877.	679	2879.	681	2881.	685	2916.	687	2949.									
688	2781.	691	2882.	692	2327.	693	2682.	694	1860.									
697	2881.	698	1802.	699	2880.	700	1507.	704	1628.									
706	1593.	708	1540.	710	433.7	712	312.4	714	120.1									

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MACH 14 FLOW RESTRICTOR		TRANSIENT HEAT TRANSFER ANALYSIS		STEP 1		INCREMENT 10	
716	216.0	718	171.0	720	105.0	723	2942.
729	2880	731	2880	735	41.11	737	2883
744	1505	748	30.26	750	2464.	754	75.01
757	2466	758	1884.	759	759.1	760	1882.
762	1877	763	2736	764	2464.	765	2712.
767	2681	768	797.7	777	806.3	778	1875
780	1875	783	2674	784	2890.	785	2676
799	2890	800	910.2	801	918.0	802	907.5
804	901.4	805	2896.	806	2889	807	2896
809	2896.	810	907.3	823	916.9	824	909.9
826	913.8	827	2889	828	2895	829	2895.
831	2895	832	923.0	833	2895	834	926.2
848	908.2	849	2890	850	913.2	853	2895
855	2896	856	922.7	871	2887	872	894.8
874	985.9	877	2895.	878	897.7	879	2895.
895	2887.	896	1440	897	2887.	898	1281
902	1159	903	2894	904	1094	901	2894.
924	88.99	926	153.6	928	128.2	922	135.1
946	898.1	947	2889	948	893.5	945	2889
953	2896	954	898.9	969	120.4	952	904.1
972	70.43	975	107.7	976	68.98	971	76.56
995	221.5	998	197.5	1001	187.3	978	72.03
1010	176.3	1022	78.95	1023	71.95	1007	1007
1028	72.16	1029	69.95	1031	76.12	1026	71.74
1035	70.79	1037	71.46	1038	69.81	1034	73.19
1043	72.80	1044	70.89	1046	72.11	1041	70.86
1071	371.2	1073	149.0	1074	220.0	1070	147.4
1082	141.8	1083	206.0	1106	317.2	1080	359.1
1110	110.9	1115	305.7	1116	217.3	1109	173.6
1142	177.2	1145	86.09	1151	165.5	1119	105.8
1170	69.03	1172	70.34	1173	70.01	1169	72.25
1181	69.90	1182	70.06	1187	71.93	1179	69.40
1191	70.21	1201	1116	1202	2763.	1190	69.85
1205	498.2	1206	789.1	1207	2755	1204	1063
1210	2762	1211	2813	1207	1123	1209	1017
1215	2749	1216	2815	1217	783.8	1214	710.2
1220	650.1	1221	2832	1222	1336	1219	1308
1225	1308.	1226	773.5	1227	890.1	1224	2817
1230	1222	1231	2829	1232	2813	1229	2827
1235	827.3	1236	2795	1237	2820	1234	681.8
1240	1551	1241	775.9	1242	2830	1239	2806
1245	2369	1246	2353	1247	2933	1244	2946
1250	2396	1251	2320	1252	2925	1249	2961
1255	1203	1256	2754	1257	2804	1254	2482
1260	1044.	1261	2749	1262	2805	1259	517.3
1265	706.0	1266	2827	1267	175.6	1264	380.1
						1269	2804

**MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS**

1270	2809.	1271	523.9	1272	698.2	1273	1239.	1274	2815.
1275	2812.	1276	312.3	1277	573.2	1278	828.2	1279	2803.
1280	377.8	1281	2420	1282	2932.	1283	2246.	1284	2359.
1285	2953.	1286	2196.	1287	2244.	1288	48.80	1291	70.73
1292	89.15	1293	111.2	1294	70.32	1295	83.92	1296	55.70
1299	70.18	1300	83.84	1301	98.20	1302	67.07	1303	84.13
1304	62.47	1306	70.18	1307	83.09	1308	82.75	1309	77.73
1312	115.0	1313	141.9	1314	149.6	1315	111.1	1316	333.9
1317	91.46	1320	91.33	1321	126.7	1322	343.8	1323	109.9
1324	332.2	1325	118.3	1327	109.9	1328	340.0	1329	327.5
1330	2094.	1332	2116.	1333	2130.	1334	2114.	1335	2102.
1337	2116.	1338	2122.	1339	2114.	1340	2116.	1341	2114.
1343	2750.	1346	374.6	1348	1820.	1350	704.6	1351	2748.
1352	2825.	1353	689.1	1354	303.5	1355	464.4	1356	709.4
1357	1355.	1358	599.1	1359	2819.	1360	490.0	1361	434.7
1362	774.1	1364	2827	1367	583.0	1369	2039.	1371	850.5
1372	2837.	1373	2808.	1374	936.5	1375	475.6	1376	628.5
1377	943.2	1378	1475.	1379	732.1	1380	2800.	1381	723.1
1382	585.0	1383	959.6	1385	2967.	1388	2289.	1389	2638.
1389	2231.	1390	2970.	1391	2333.	1392	2252.	1393	2295.
1394	2191.	1395	2287.	1396	2758.	1399	2760.	1400	1656.
1401	2807.	1402	1392.	1403	2809.	1404	1007.	1407	741.2
1408	540.4	1409	1162.	1410	304.6	1411	821.2	1412	523.0
1414	317.1	1415	571.3	1416	293.5	1417	2803.	1420	2806.
1421	1895.	1422	2820.	1423	1627.	1424	2816.	1425	1303.
1428	1007.	1429	756.0	1430	1289.	1431	450.3	1432	966.9
1433	742.7	1435	461.	1436	754.2	1437	503.0	1438	2925.
1440	2926.	1441	2577.	1442	2487.	1443	2432.	1445	2356.
1446	2263.	1447	2195.	1448	2281.	1449	2217.	1450	2357.
1453	2749.	1454	1144.	1455	2808.	1456	1023.	1458	464.9
1461	262.8	1462	151.4	1463	532.3	1464	98.81	1465	309.9
1466	164.9	1468	107.9	1469	142.5	1470	96.13	1471	2800.
1474	2805.	1475	1370.	1476	1469.	1477	1207.	1479	675.5
1482	433.5	1483	242.4	1484	688.9	1485	162.0	1486	504.5
1487	245.4	1489	154.4	1490	377.9	1491	348.3	1492	2924.
1494	2946.	1495	2397.	1496	2386.	1497	2282.	1499	2223.
1500	2148.	1501	2130.	1502	2157.	1503	2129.	1507	124.7
1509	137.2	1512	74.98	1513	97.94	1514	82.64	1516	87.21
1520	182.1	1522	194.1	1525	123.9	1526	341.3	1527	140.6
1529	335.2	1532	2160.	1533	2159.	1535	2117.	1536	2119.
1541	66.94	1543	70.41	1545	67.65	1548	69.15	1549	70.22
1550	84.16	1551	68.36	1552	80.94	1553	67.74	1555	68.73
1556	82.76	1557	81.65	1562	109.0	1564	111.9	1566	113.8
1569	110.3	1570	110.7	1571	331.7	1572	110.4	1573	329.5
1574	107.2	1576	111.0	1577	330.4	1578	330.0	1582	2113
1583	2116.	1584	2113.	1586	2115.	1587	2115	1588	2114

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MACH 14 FLOW RESTRICTOR		TRANSIENT HEAT TRANSFER ANALYSIS		STEP 1		INCREMENT 10	
1589	2114	1590	2114	1592	2910	1593	2914
1594	1084	1595	1214	1597	2910	1598	2914
1599	1078	1600	1214	1602	2914	1603	1214
1604	2135	1605	2934	1607	1476	1608	1976
1609	2135	1610	2936	1612	1477	1613	1978
1614	2133	1615	2959	1617	2979	1618	2963
1620	2979	1621	2962	1624	468 1	1627	445 7
1628	274 3	1629	324 0	1631	1210	1632	432 1
1635	464 0	1636	242 9	1638	1077	1639	1203
1640	346 6	1642	532 6	1644	1202	1645	719 7
1648	699 5	1649	349 5	1651	1450	1652	1965
1653	664 1	1656	727 5	1658	461 4	1659	1445
1660	1947	1661	536 1	1664	424 5	1665	1961
1678	1835	1679	2910	1683	1835	1684	2911
1685	2912	1688	1836	1691	2128	1692	2933
1693	2957	1696	2130	1698	2958	1701	2129
1702	2957	1704	2983	1707	2984	1708	2964
1710	2983	1711	1834	1713	2913	1714	1081
1715	1197	1716	1835	1718	2913	1719	1084
1720	1202	1725	2125	1726	2959	1727	1449
1728	1939	1729	2130	1731	2962	1732	1454
1733	1926	1737	2981	1740	2980	1741	2962
1744	1826	1745	2910	1747	1071	1748	1198
1749	1834	1750	2910	1752	1080	1753	1202
1757	2123	1758	2937	1760	1450	1761	1999
1762	2131	1763	2932	1765	1446	1766	1950
1770	2981	1771	2963	1774	2963	1777	1832
1778	2910	1779	2914	1781	1194	1782	1830
1783	2910	1784	2914	1786	1200	1790	2126
1791	2935	1792	2959	1794	1956	1795	2128
1796	2938	1797	2960	1799	1968	1803	2981
1804	2962	1806	2979	1810	485 5	1813	187 2
1814	234 7	1815	425 5	1819	180 9	1820	311 0
1822	102 4	1823	751 4	1827	344 1	1828	671 4
1831	148 2	1832	254 6	1835	124 4	1843	68 21
1846	70 65	1847	75 55	1849	71 82	1850	70 24
1851	69 23	1854	70 52	1856	78 79	1857	70 34
1858	70 46	1859	68 55	1862	72 04	1863	70 35
1864	62 00	1867	71 39	1869	90 94	1870	71 68
1871	70 87	1872	64 97	1876	77 54	1877	81 45
1878	69 72	1879	71 16	1882	70 86	1883	71 47
1884	70 31	1898	2911	1892	1830	1903	2911
1904	2913	1905	1063	1907	1829	1908	2913
1909	1209	1911	2938	1915	2130	1916	2939
1917	2956	1918	1466	1920	2129	1921	2956
1922	2000	1924	2966	1927	2965	1929	2982
1834				1834			
1833				1833			
1831				1831			
2961				2961			
1990				1990			
2981				2981			
1079				1079			
293 3				293 3			
274 7				274 7			
512 2				512 2			
307 6				307 6			
807 4				807 4			
2913				2913			
2933				2933			
2964				2964			
2910				2910			
2931				2931			
2932				2932			
2961				2961			
2913				2913			
1751				1751			
2955				2955			
2960				2960			
2981				2981			
1078				1078			
1067				1067			
1449				1449			
1460				1460			
2963				2963			
1810				1810			
1819				1819			
1827				1827			
1835				1835			
1849				1849			
1856				1856			
1862				1862			
1869				1869			
1876				1876			
1882				1882			
1902				1902			
1907				1907			
1915				1915			
1920				1920			
1927				1927			

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MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS				STEP 1		INCREMENT 10			
1934	213.6	1936	728.0	1941	320.1	1942	176.9		
1943	212.2	1944	332.3	1946	275.7	1948	241.1		
1949	199.3	1950	333.9	1957	1066	1959	487.3		
1962	465.8	1963	217.2	1965	491.1	1966	906.3		
1967	428.5	1969	352.6	1971	485.8	1988	658.2		
1990	558.7	1992	445.3	1976	268.7	1997	480.1		
1998	174.4	1999	343.7	2002	169.4	2003	256.0		
2004	151.3	2009	994.8	2013	663.1	2016	502.4		
2017	384.7	2018	775.4	2020	543.3	2021	374.2		
2023	238.4	2024	357.1	2042	464.9	2044	425.2		
2046	244.8	2049	162.5	2051	230.3	2052	85.25		
2053	152.0	2054	104.2	2057	96.44	2058	77.47		
2063	734.8	2065	640.3	2070	204.9	2071	129.9		
2072	352.1	2073	92.65	2075	132.8	2077	91.82		
2078	100.4	2079	76.10	2097	105.5	2100	72.04		
2101	76.81	2102	72.47	2108	93.82	2110	100.3		
2113	76.28	2114	78.18	2117	74.40	2129	69.60		
2131	71.18	2133	69.56	2137	70.92	2138	71.25		
2139	70.23	2140	70.17	2143	70.37	2144	70.82		
2145	70.36	2150	70.70	2154	71.90	2157	70.25		
2158	70.90	2159	72.29	2161	69.06	2162	68.81		
2164	70.56	2165	70.27	2179	1718	2180	2883		
2181	2887	2182	907.6	2184	1717	2185	2882		
2186	2838	2187	903.2	2189	1715	2190	2887		
2191	898.7	2192	1720	2194	2893	2195	912.2		
2196	911.0	2197	1720	2199	2893	2200	908.4		
2201	908.1	2202	1719	2204	901.7	2205	1724		
2206	2895	2207	2898	2209	933.6	2210	1723		
2211	2895	2212	2898	2214	931.2	2215	1721		
2216	2898	2217	925.7	2228	368.2	2229	228.6		
2230	228.6	2231	907.0	2233	351.6	2236	385.5		
2237	198.9	2238	203.7	2240	911.9	2241	265.6		
2243	450.1	2244	192.7	2246	369.8	2249	347.0		
2250	214.6	2251	213.7	2253	918.4	2254	334.3		
2257	366.5	2258	187.4	2260	908.0	2261	915.2		
2262	251.3	2264	434.0	2266	911.3	2267	359.4		
2270	335.0	2271	201.2	2273	920.1	2274	939.7		
2275	326.5	2278	355.2	2280	195.0	2281	917.9		
2282	936.9	2283	248.7	2286	185.1	2287	930.8		
2300	1721	2301	2883	2305	1722	2306	2883		
2307	2887	2310	1723	2313	1723	2314	2890		
2315	2892	2318	1725	2320	2892	2323	1725		
2324	2892	2326	1727	2328	2898	2331	1729		
2332	2896	2333	2897	2337	2897	2346	1724		
2347	2883	2348	2886	2350	907.1	2351	1722		
2352	2883	2353	2887	2355	912.0	2359	1725		

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MACH 14 FLOW RESTRICTOR		STEP		1		INCREMENT 10	
TRANSIENT HEAT TRANSFER ANALYSIS							
2360	2889	2361	2892	910.9	2363	910.2	2364
2365	2889	2366	2893	913.3	2368	914.8	2372
2373	2896	2374	2897	921.1	2375	930.9	2377
2378	2896	2379	2898	923.1	2381	935.8	2392
2393	2883	2394	2884	982.3	2396	899.8	2397
2398	2884	2399	2885	984.6	2400	1004	2405
2406	2889	2407	2890	960.1	2409	894.0	2410
2411	2890	2412	2891	962.8	2413	970.7	2418
2419	2895	2420	2897	941.7	2421	906.9	2423
2424	2896	2425	2898	947.5	2426	955.2	2438
2439	2883	2440	2885	1713	2441	1616	2443
2444	2884	2445	2884	1217	2446	1392	2451
2452	2889	2453	2890	1403	2454	1291	2456
2457	2889	2458	2890	1100	2459	1182	2464
2465	2895	2466	2897	1147	2467	1042	2469
2470	2895	2471	2897	1007	2472	1013	2484
2487	196.8	2488	179.1	464.5	2489	129.9	2493
2494	238.6	2495	94.65	505.2	2497	152.7	2501
2502	399.6	2503	108.0	131.2	2506	235.2	2509
2510	430.5	2511	145.2	163.7	2514	353.0	2518
2519	135.1	2520	230.2	90.35	2522	67.93	2533
2534	75.89	2535	80.20	72.14	2536	70.17	2538
2541	69.39	2542	75.11	75.32	2543	70.00	2545
2546	70.30	2547	70.14	72.40	2549	69.62	2551
2554	69.92	2555	73.94	76.14	2556	71.12	2558
2559	70.17	2560	69.82	73.24	2562	73.09	2565
2566	70.75	2567	70.03	70.16	2569	71.81	2571
2572	68.37	2573	69.87	73.29	2576	80.15	2578
2579	69.53	2580	70.34	69.77	2583	73.15	2585
2586	69.98	2587	69.91	69.10	2590	70.33	2591
2592	69.61	2606	2883	894.4	2610	1714	2611
2612	2887	2613	891.7	895.7	2615	1714	2616
2617	891.1	2619	2889	899.6	2621	1717	2624
2625	2892	2626	896.6	898.5	2628	1717	2629
2630	893.7	2632	2896	905.2	2634	1720	2637
2638	2897	2639	902.3	921.1	2641	1719	2642
2643	916.7	2655	179.0	605.8	2657	235.6	2662
2663	151.7	2664	151.3	277.3	2666	379.6	2667
2669	203.2	2670	150.7	229.1	2671	170.3	2678
2680	222.9	2683	232.4	145.2	2684	142.6	2686
2687	363.1	2688	191.8	191.2	2691	144.3	2692
2697	161.5	2699	590.9	220.6	2704	242.4	2705
2706	147.4	2707	246.4	366.7	2709	189.6	2711
2712	149.2	2713	212.6	550.5	2732	452.0	2734
2737	284.6	2738	227.1	325.3	2740	146.0	2741
2742	221.3	2744	148.8	180.3	2746	113.7	2751



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STEP 1 INCREMENT 10									
2753	440.3	2755	354.2	2758	271.2	2759	210.3	2760	309.9
2761	137.3	2762	219.4	2763	203.5	2765	139.7	2766	167.2
2767	107.9	2772	528.5	2774	436.4	2776	340.5	2779	261.8
2780	200.0	2781	313.5	2782	134.2	2783	225.3	2784	189.0
2786	210.5	2787	169.9	2788	113.3	2805	426.5	2807	389.7
2809	131.5	2812	158.8	2813	110.5	2814	187.3	2815	98.55
2816	131.3	2817	101.5	2819	86.42	2820	90.57	2821	79.22
2826	393.9	2828	357.2	2830	197.9	2833	144.2	2834	101.2
2835	170.4	2836	83.41	2837	113.8	2838	96.89	2840	82.19
2841	83.73	2842	75.99	2847	369.9	2849	340.8	2851	188.3
2854	130.5	2855	97.89	2856	167.5	2857	82.15	2858	111.1
2859	91.30	2861	77.37	2862	86.71	2863	77.93	2879	106.3
2881	92.86	2884	78.10	2885	71.37	2886	64.14	2888	74.48
2892	89.75	2894	101.6	2897	69.34	2898	68.58	2899	73.41
2901	71.16	2905	92.12	2907	98.44	2910	70.18	2911	71.08
2912	67.83	2914	71.90	2926	67.72	2928	71.53	2930	68.49
2933	70.55	2934	70.72	2935	71.81	2936	69.86	2937	69.17
2938	70.13	2940	70.04	2941	70.20	2942	70.00	2947	68.25
2949	71.00	2951	69.14	2954	70.32	2955	70.36	2956	71.54
2957	69.86	2958	69.30	2959	70.05	2961	69.98	2962	69.86
2963	70.12	2968	68.03	2970	71.22	2972	68.25	2975	70.45
2976	70.76	2977	71.56	2978	69.84	2979	69.53	2980	70.17
2982	69.93	2983	70.13	2984	70.20	2997	2433	2998	2942
2999	2882	3000	2184	3001	1097	3002	3002	3003	2941
3004	2882	3005	2187	3006	1093	3007	2436	3008	2882
3009	1083	3010	1726	3011	2880	3012	2882	3013	947.5
3014	916.2	3015	1726	3016	2879	3017	2882	3018	946.3
3019	913.6	3020	1727	3021	2881	3022	908.5	3030	2015
3033	2004	3034	1998	3035	559.5	3036	2177	3037	1105
3038	1999	3041	2011	3042	1983	3043	534.4	3044	2174
3045	1101	3046	1961	3048	2039	3049	520.4	3050	1102
3051	443.0	3054	421.1	3055	301.1	3056	264.0	3057	941.6
3058	920.2	3059	400.7	3062	438.0	3063	265.1	3064	235.4
3065	937.5	3066	916.3	3067	303.0	3069	506.7	3070	222.4
3071	914.6	3084	2432	3085	2942	3086	2882	3089	2433
3070	2942	3091	2881	3094	2433	3095	2881	3097	1727
3098	2880	3099	2881	3102	1728	3103	2881	3104	2880
3107	1729	3108	2880	3117	2439	3118	2881	3119	2881
3120	2176	3121	1116	3122	2432	3123	2943	3124	2882
3125	2176	3126	1106	3130	1728	3131	2880	3132	2879
3133	939.2	3134	906.9	3135	1727	3136	2880	3137	2881
3138	943.6	3139	915.8	3150	2651	3151	2951	3152	2880
3153	2434	3154	1121	3155	2530	3156	2946	3157	2879
3158	2268	3159	1316	3163	1762	3164	2878	3165	2876
3166	1052	3167	899.7	3168	1842	3169	2881	3170	2878
3171	1041	3172	1042	3183	2926	3184	2886	3185	2888

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3186	2648	3187	2844	3188	2957	3189	2875	3190	2693
3191	2054	3195	2600	3196	2882	3197	2881	3198	2224
3199	2058	3200	2372	3201	2882	3202	2882	3203	1387
3204	1664	3215	1822	3218	1609	3219	511.4	3220	1785
3223	1562	3224	474.6	3225	1737	3227	419.7	3228	750.7
3231	344.1	3232	349.8	3233	580.3	3236	201.4	3237	263.1
3238	314.9	3239	121.5	3240	2941	3241	2187	3243	2436
3254	2941	3255	2882	3256	2188	3257	1080	3258	2437
3259	2882	3260	1078	3262	2880	3264	939.9	3266	1726
3267	2879	3268	2881	3269	938.3	3270	905.9	3271	1726
3272	2881	3273	901.7	3275	1974	3277	2080	3279	1950
3292	1989	3293	1962	3294	479.1	3295	1984	3296	494.5
3297	1939	3299	1973	3300	473.1	3301	574.0	3304	240.9
3308	653.1	3310	269.5	3313	323.4	3314	209.5	3315	174.2
3316	335.5	3317	410.2	3318	237.5	3320	263.1	3321	173.9
3322	261.8	3339	2064	3341	2043	3343	2025	3346	2002
3327	1980	3348	448.9	3349	1990	3350	2025	3351	1982
3333	1959	3354	527.0	3355	806.9	3360	580.0	3362	488.8
3344	436.2	3367	340.5	3368	286.3	3369	600.9	3370	183.2
3371	246.5	3372	286.1	3374	197.5	3375	354.3	3376	124.8
3373	2094	3395	2567	3397	2032	3400	206.9	3401	2078
3403	614.1	3403	2544	3404	529.4	3405	2058	3407	2321
3408	522.4	3409	449.0	3414	462.7	3416	434.4	3418	255.7
3421	229.9	3422	126.3	3423	212.7	3424	144.5	3425	156.6
3426	127.9	3428	128.0	3429	102.8	3430	66.35	3446	1524
3439	1720	3451	1507	3452	409.0	3453	1714	3455	413.2
3459	103.4	3461	175.4	3464	40.98	3465	58.21	3466	148.9
3468	45.19	3476	2051	3477	2471	3478	2231	3479	1891
3480	1691	3481	2052	3482	2464	3483	2247	3484	1879
3485	1094	3486	2052	3487	2238	3488	1101	3489	1203
3490	2711	3491	2879	3492	772.2	3493	916.1	3494	1187
3495	2498	3496	2894	3497	786.4	3498	877.8	3499	1164
3500	2912	3501	822.5	3510	2461	3512	1877	3514	2052
3515	2462	3516	2235	3517	2461	3518	1106	3519	2051
3520	2236	3521	1103	3523	2483	3525	799.5	3527	1156
3528	2677	3529	2914	3530	805.3	3531	796.6	3532	1155
3533	2912	3534	794.5						

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MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE22-FEB-84      TIME18 05 51      PAGE 16  
STEP 1 INCREMENT 10

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 10

INCREMENT NUMBER 11 ATTEMPT NUMBER 1  
TIME INCREMENT = 2.989E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 16.7 AND OCCURS AT NODE 1322

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.600 , TIME INCREMENT COMPLETED IS 2.989E-02, FRACTION OF STEP IS 1.00  
TOTAL ACCUMULATED TIME IS 0.600  
TOTAL HEAT TIME IS 0.600

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	2762	2	576.8	3	2776	4	2761	5	506.2
6	2776	7	2760	8	470.2	9	2767	10	2813
11	863.9	12	2829	13	2815	14	782.1	15	2827
16	2831	17	727.6	18	2824	19	2946	20	2417
21	2947	22	2951	23	2392	24	2948	25	2973
26	2373	27	2939	28	418.1	29	102.4	30	66.54
31	298.6	32	90.53	33	66.94	34	124.1	35	76.48
36	66.16	37	610.4	38	156.1	39	98.52	40	448.4
41	137.5	42	100.4	43	221.7	44	105.3	45	104.8
46	2310	47	2188	48	2162	49	2274	50	2180
51	2163	52	2229	53	2167	54	2165	58	2757
59	359.4	60	1147	61	2752	62	333.9	63	642.6



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MACH 14 FLOW RESTRICTOR		TRANSIENT HEAT TRANSFER ANALYSIS		STEP 1		INCREMENT 11	
432	87 15	433	2753	439	2799	441	2800
445	2934	447	2934	471	2917	473	2917
475	2941	477	2941	481	2969	483	2969
495	2968	487	2915	491	2915	493	2938
505	2936	497	2938	501	2960	503	2963
519	2916	507	2916	513	2934	517	2964
535	2963	523	2917	529	2945	531	2936
544	2968	537	2964	541	1151	543	2917
553	1154	547	2940	549	2940	550	1532
587	2966	555	2968	581	2917	585	2945
617	2944	591	2968	613	2949	615	2949
627	2947	619	2887	623	2886	625	2890
637	2890	629	2889	633	2948	635	2948
647	2886	639	2886	643	2889	645	2889
661	2889	649	2947	655	2884	657	2887
675	2883	663	2890	669	2949	673	2877
688	2883	679	2886	685	2922	687	2955
697	2803	691	2890	700	2890	694	1926
706	2888	698	1872	702	1581	704	1684
716	1652	708	1601	710	337 1	714	138 0
729	237 0	718	184 9	723	337 1	725	2947
744	2886	731	2886	735	2948	742	1568
757	1563	748	39 64	754	75 55	756	78 30
762	2512	758	1942	760	1940	761	2511
767	1935	763	2754	765	2733	766	852 6
780	2703	768	869 6	778	1933	779	2508
799	1933	783	2695	785	2697	786	876 8
804	2896	800	978 9	802	976 2	803	2895
809	970 5	805	2902	806	2902	808	984 2
826	2901	810	977 0	824	978 3	825	2895
831	981 2	827	2895	829	2901	830	988 3
848	2901	832	991 0	834	994 9	837	2894
855	975 3	849	2896	853	2901	854	986 8
874	1054	856	990 8	872	964 1	873	2894
895	2894	877	2901	879	2900	880	1031
902	1231	896	1514	898	1353	901	2900
924	92 25	903	2900	920	177 9	922	144 3
946	967 1	926	166 8	930	89 14	945	2895
953	2901	947	2895	951	2901	952	973 8
972	70 46	954	968 6	970	69 41	971	77 71
995	244 3	975	116 1	977	73 15	978	72 14
1010	193 7	998	217 9	1004	229 3	1007	204 9
1028	72 07	1022	80 28	1025	74 87	1026	71 84
1035	70 82	1029	70 04	1032	70 87	1034	73 61
1043	73 25	1037	71 48	1040	76 72	1041	70 92
		1044	70 94	1047	69 61	1070	160 7

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MACH 14 FLOW RESTRICTOR										STEP 1			INCREMENT 11											
TRANSIENT HEAT TRANSFER ANALYSIS																								
1071	409 7	1073	159 6	1074	244 2	1079	151 5	1080	396 6															
1082	152 6	1083	228 6	1106	350 2	1107	246 1	1109	191 2															
1110	118 7	1115	337 6	1116	239 1	1118	178 5	1119	112 9															
1142	1142 3	1145	89 55	1151	179 3	1154	83 87	1169	72 12															
1170	69 06	1172	70 38	1173	69 95	1178	71 17	1179	69 43															
1181	69 98	1182	70 04	1187	71 93	1188	69 24	1190	69 91															
1191	70 19	1201	1182	1202	2773	1203	2824	1204	1136															
1205	556 0	1206	864 9	1207	2765	1208	2835	1209	1082															
1210	2773	1211	2823	1212	1194	1213	477 0	1214	784 2															
1215	2760	1216	2825	1217	847 3	1218	2830	1219	1370															
1220	717 2	1221	2842	1222	1411	1223	2829	1224	2830															
1225	1394	1226	841 0	1227	1000	1228	2814	1229	2841															
1230	1298	1231	2838	1232	2827	1233	1449	1234	744 6															
1235	936 8	1236	2806	1237	2834	1238	1033	1239	2821															
1240	1620	1241	878 4	1242	2844	1243	2463	1244	2954															
1245	2439	1246	2411	1247	2942	1248	2424	1249	2968															
1250	2463	1251	2378	1252	2935	1253	2331	1254	2541															
1255	1262	1256	2764	1257	2814	1258	383 3	1259	566 7															
1260	1104	1261	2759	1262	2814	1263	207 6	1264	416 5															
1265	752 7	1266	2839	1267	190 6	1268	1479	1269	2813															
1270	2823	1271	563 5	1272	780 1	1273	1309	1274	2822															
1275	2825	1276	331 0	1277	645 1	1278	886 0	1279	2821															
1280	432 8	1281	2482	1282	2939	1283	2304	1284	2426															
1285	2959	1286	2249	1287	2310	1288	48 76	1291	70 36															
1292	89 91	1293	114 5	1294	69 90	1295	84 90	1296	55 21															
1299	69 78	1300	83 80	1301	101 1	1302	66 67	1303	85 15															
1304	63 25	1306	69 45	1307	83 73	1308	84 29	1309	69 94															
1312	108 7	1313	137 9	1314	391 2	1315	103 8	1316	375 5															
1317	83 02	1320	106 9	1321	121 7	1322	385 5	1323	102 7															
1324	373 8	1325	111 4	1327	103 0	1328	380 2	1329	369 4															
1330	2144	1332	2167	1333	2181	1334	2164	1335	2151															
1337	2166	1338	2174	1339	2164	1340	2166	1341	2165															
1343	2761	1346	415 8	1348	1874	1350	764 0	1351	2760															
1352	2834	1353	747 2	1354	334 3	1355	517 4	1356	775 1															
1357	1439	1358	656 6	1359	2829	1360	542 3	1361	477 7															
1362	854 3	1364	2835	1367	632 7	1369	2098	1371	924 2															
1372	2835	1373	2823	1374	1002	1375	513 0	1376	717 6															
1377	1021	1378	1579	1379	804 4	1380	2816	1381	786 5															
1382	665 9	1383	1067	1385	2973	1387	2344	1388	2685															
1389	2303	1390	2376	1391	2394	1392	2305	1393	2363															
1394	2265	1395	2349	1396	2769	1399	2771	1400	1717															
1401	2819	1402	1455	1403	2820	1404	1079	1407	804 2															
1408	596 9	1409	1243	1410	337 7	1411	889 1	1412	578 8															
1414	350 2	1415	633 9	1416	326 8	1417	2814	1420	2817															
1421	1962	1422	2834	1423	1697	1424	2829	1425	1383															
1428	1077	1429	822 7	1430	1394	1431	488 8	1432	1064															

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MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

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STEP 1 INCREMENT 11

1433	811.9	1435	509.7	1436	848.4	1437	571.6	1438	2935
1440	2936.	1441	2631	1442	2547	1443	2496	1443	2935
1446	2327	1447	2253	1448	2346	1449	2276	1448	2418
1453	2758	1454	1209	1455	2817	1456	1075	1450	2767
1461	294.1	1462	165.8	1463	578.8	1464	103.7	1458	509.7
1466	177.2	1468	110.6	1469	154.9	1470	100.2	1465	346.4
1474	2812	1475	1443	1476	2834	1477	1267	1471	2811
1482	467.2	1483	235.3	1484	771.2	1485	161.4	1479	725.7
1487	258.2	1489	154.7	1490	427.0	1491	389.6	1486	579.4
1494	2951.	1495	2463	1496	2446	1497	2339	1492	2933
1500	2201.	1501	2180.	1502	2212.	1503	2183.	1499	2278
1509	139.5	1512	76.58	1513	103.5	1514	87.36	1507	124.3
1520	176.4	1522	192.0	1525	120.1	1526	385.8	1516	89.08
1529	376.9	1532	2207.	1533	2206.	1535	2169.	1527	141.4
1541	67.47	1543	69.39	1545	68.17	1548	68.41	1536	2173
1550	84.45	1551	67.89	1552	82.42	1553	66.71	1549	69.52
1556	84.27	1557	82.60	1562	104.1	1564	104.2	1555	68.26
1569	103.1	1570	104.5	1571	372.3	1572	103.6	1556	108.2
1574	99.82	1576	104.1	1577	371.9	1578	371.1	1573	371.0
1583	2166.	1584	2164.	1586	2165.	1587	2165.	1582	2164.
1589	2164.	1590	2165.	1591	1907.	1592	2916.	1588	2165.
1594	1165.	1595	1300.	1596	1906.	1597	2916.	1593	2921.
1599	1160.	1600	1299.	1601	1904.	1602	2920.	1598	2921.
1604	2207.	1605	2939.	1606	2966.	1607	1563.	1603	1300.
1609	2207.	1610	2940.	1611	2966.	1612	1563.	1608	2039.
1614	2205.	1615	2964.	1616	2052.	1617	2982.	1613	2041.
1620	2982.	1621	2963.	1623	2984.	1624	517.4	1618	2964.
1628	305.8	1629	363.6	1630	1158.	1631	1775.	1627	495.1
1635	514.0	1636	271.1	1637	330.1	1638	1155.	1632	478.2
1640	385.2	1642	585.7	1643	307.8	1644	1287.	1639	1287.
1648	760.6	1649	398.7	1650	560.8	1651	1536.	1645	779.7
1653	721.0	1656	788.1	1657	351.9	1658	507.5	1652	2028.
1660	2010.	1661	585.3	1663	870.8	1664	465.5	1659	1530.
1678	1907.	1679	2916.	1680	2920.	1683	1907.	1665	2025.
1685	2919.	1688	1909.	1689	2919.	1691	2200.	1684	2916.
1693	2961.	1696	2202.	1697	2938.	1698	2963.	1692	2938.
1702	2962.	1704	2986.	1705	2966.	1707	2987.	1701	2201.
1710	2986.	1711	1906.	1712	2916.	1713	1708	2966.	2966.
1715	1281.	1716	1907.	1717	2916.	1718	1160.	1708	2966.
1720	1286.	1724	2196.	1725	2936.	1726	2920.	1719	1163.
1728	2002.	1729	2201.	1730	2937.	1731	2964.	1727	1535.
1733	1991.	1737	2984.	1738	2963.	1740	2967.	1732	1540.
1744	1898.	1745	2916.	1746	2919.	1747	1150.	1741	2964.
1749	1906.	1750	2916.	1751	2920.	1752	1159.	1748	1284.
1757	2196.	1758	2942.	1759	2960.	1760	1534.	1753	1285.
1762	2202.	1763	2937.	1764	2965.	1765	1531.	1761	2059.
								1766	2011.

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								STEP 1		INCREMENT 11	
1770	2985.	1771	2965.	1773	2984.	1774	2964	1777	1904.	1777	1904.
1778	2916.	1779	2920.	1780	1157.	1781	1277	1782	1903.	1782	1903.
1783	2916.	1784	2920.	1785	1148.	1786	1283.	1790	2197	1790	2197.
1791	2940.	1792	2964	1793	1533.	1794	2016	1795	2199	1795	2199.
1796	2943	1797	2965	1798	1545.	1799	2028	1803	2983.	1803	2983.
1804	2964.	1806	2983	1807	2964.	1810	533.2	1813	205.4	1813	205.4
1814	259.3	1815	468.6	1818	135.5	1819	198.5	1820	341.4	1820	341.4
1822	108.9	1823	808.5	1826	279.5	1827	376.8	1828	724.0	1828	724.0
1831	163.2	1832	277.6	1833	507.0	1835	131.4	1843	68.56	1843	68.56
1846	70.71	1847	76.04	1848	85.51	1849	71.97	1850	70.14	1850	70.14
1851	69.53	1854	70.55	1855	75.28	1856	79.77	1857	70.38	1857	70.38
1858	70.39	1859	68.96	1861	70.79	1862	72.15	1863	70.38	1863	70.38
1864	61.94	1867	71.39	1868	82.17	1869	92.70	1870	71.73	1870	71.73
1871	70.40	1872	64.85	1875	71.15	1876	78.12	1877	83.05	1877	83.05
1878	69.69	1879	70.72	1880	70.78	1882	70.65	1883	71.38	1883	71.38
1884	70.10	1898	2917	1900	1149	1902	1903.	1903	2916.	1903	2916.
1904	2920.	1905	1145.	1906	1297.	1907	1902.	1908	2919.	1908	2919.
1909	1294.	1911	2943	1913	1557	1915	2202	1916	2944.	1916	2944.
1917	2961.	1918	1552	1919	2062	1920	2202.	1921	2961.	1921	2961.
1922	2061.	1924	2967	1926	2984.	1927	2966.	1929	2984.	1929	2984.
1934	236.7	1936	794.3	1938	347.6	1941	355.3	1942	195.4	1942	195.4
1943	236.5	1944	370.4	1945	619.7	1946	306.8	1948	269.7	1948	269.7
1949	220.8	1950	373.3	1955	300.1	1957	1140	1959	532.1	1959	532.1
1962	514.1	1963	244.5	1964	330.1	1965	542.8	1966	974.1	1966	974.1
1967	469.4	1969	392.2	1970	309.8	1971	540.8	1988	721.2	1971	721.2
1990	613.9	1992	493.7	1995	386.6	1996	299.6	1997	530.9	1997	530.9
1998	192.2	1999	381.1	2000	284.2	2002	187.3	2003	285.1	2003	285.1
2004	165.6	2009	1066.	2011	921.9	2013	726.3	2016	555.0	2016	555.0
2017	427.9	2018	837.1	2019	257.1	2020	590.4	2021	416.5	2021	416.5
2023	263.5	2024	397.2	2025	205.9	2042	512.7	2044	466.6	2044	466.6
2046	270.1	2049	178.3	2050	119.2	2051	254.4	2052	88.45	2052	88.45
2053	167.3	2054	111.0	2056	82.42	2057	101.1	2058	78.88	2058	78.88
2063	792.0	2065	691.4	2067	364.9	2070	229.4	2071	141.0	2071	141.0
2072	381.7	2073	96.65	2074	228.1	2075	142.4	2077	94.29	2077	94.29
2078	107.6	2079	78.59	2095	97.46	2097	109.7	2100	72.75	2100	72.75
2101	78.25	2102	73.68	2104	73.02	2108	97.31	2110	106.5	2110	106.5
2113	77.25	2114	80.67	2115	88.17	2117	74.59	2129	69.71	2129	69.71
2131	71.15	2133	69.71	2136	70.63	2137	70.93	2138	71.11	2138	71.11
2139	70.22	2140	70.17	2141	70.25	2143	70.37	2144	70.86	2144	70.86
2145	70.27	2150	70.96	2152	70.14	2154	72.05	2157	70.07	2157	70.07
2158	70.74	2159	71.52	2160	70.21	2161	68.98	2162	68.55	2162	68.55
2164	70.45	2165	70.24	2166	69.53	2179	1782	2180	2889	2180	2889
2181	2893	2182	976.8	2183	976.9	2184	1781.	2185	2888	2185	2888
2186	2893	2187	972.5	2188	974.0	2189	1779	2190	2893.	2190	2893.
2191	967.9	2192	1785	2193	2895.	2194	2898	2195	981.1	2195	981.1
2196	979.9	2197	1784	2198	2894	2199	2898	2200	977.5	2200	977.5



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MACH 14 FLOW RESTRICTOR									
TRANSIENT HEAT TRANSFER ANALYSIS									
DATE22-FEB-84	TIME18.05.51	PAGE 22	STEP	1	INCREMENT	11			
2201	2202	1783	2203	2898	2204	970.9	2205	1788	
2206	2207	2904	2208	989.2	2209	1005	2210	1787	
2211	2212	2904	2213	984.5	2214	1003	2215	1785	
2216	2217	997.7	2218	428.2	2219	407.5	2220	253.4	
2220	2221	974.9	2222	983.6	2223	387.9	2224	425.3	
2225	2226	225.3	2227	972.0	2228	979.5	2229	294.4	
2230	2231	212.2	2232	977.2	2233	407.5	2234	384.5	
2235	2236	235.6	2237	978.2	2238	986.6	2239	369.0	
2240	2241	206.6	2242	210.3	2243	975.2	2244	982.8	
2245	2246	475.7	2247	198.7	2248	979.9	2249	396.1	
2250	2251	322.0	2252	239.2	2253	988.3	2254	1010	
2255	2256	392.4	2257	194.5	2258	215.3	2259	985.9	
2260	2261	275.5	2262	463.3	2263	203.8	2264	1002	
2265	2266	2889	2267	2893	2268	1786	2269	2889	
2270	2271	1787	2272	2893	2273	1787	2274	2895	
2275	2276	1789	2277	2895	2278	2897	2279	1789	
2280	2281	1791	2282	2901	2283	2903	2284	1792	
2285	2286	2902	2287	1793	2288	2902	2289	1787	
2290	2291	2902	2292	976.2	2293	974.4	2294	1786	
2295	2296	2892	2297	978.4	2298	979.8	2299	1788	
2300	2301	2893	2302	978.3	2303	977.5	2304	1788	
2305	2306	2897	2307	981.0	2308	982.4	2309	1792	
2310	2311	2903	2312	989.1	2313	1001	2314	1792	
2315	2316	2903	2317	991.5	2318	1006	2319	1796	
2320	2321	1051	2322	1051	2323	968.5	2324	1871	
2325	2326	1053	2327	1053	2328	1072	2329	1793	
2330	2331	1029	2332	1029	2333	963.4	2334	1844	
2335	2336	1031	2337	1031	2338	1039	2339	1789	
2340	2341	1011	2342	1016	2343	1025	2344	1820	
2345	2346	1786	2347	1289	2348	1689	2349	2359	
2350	2351	1477	2352	1477	2353	1465	2354	2201	
2355	2356	2896	2357	1172	2358	1254	2359	2161	
2360	2361	2903	2362	1219	2363	1113	2364	2060	
2365	2366	2903	2367	1078	2368	1085	2369	1973	
2370	2371	195.0	2372	509.7	2373	138.4	2374	1923	
2375	2376	98.06	2377	551.8	2378	165.2	2379	658.7	
2380	2381	113.8	2382	140.1	2383	257.6	2384	156.8	
2385	2386	157.1	2387	93.76	2388	388.9	2389	171.7	
2390	2391	252.1	2392	72.46	2393	67.75	2394	90.42	
2395	2396	81.67	2397	76.16	2398	70.07	2399	69.44	
2400	2401	75.54	2402	77.00	2403	70.06	2404	71.08	
2405	2406	74.33	2407	69.84	2408	69.42	2409	70.47	
2410	2411	69.84	2412	70.32	2413	70.32	2414	68.48	
2415	2416	70.32	2417	70.32	2418	70.32	2419	70.32	
2420	2421	70.32	2422	70.32	2423	70.32	2424	70.32	
2425	2426	70.32	2427	70.32	2428	70.32	2429	70.32	
2430	2431	70.32	2432	70.32	2433	70.32	2434	70.32	
2435	2436	70.32	2437	70.32	2438	70.32	2439	70.32	
2440	2441	70.32	2442	70.32	2443	70.32	2444	70.32	
2445	2446	70.32	2447	70.32	2448	70.32	2449	70.32	
2450	2451	70.32	2452	70.32	2453	70.32	2454	70.32	
2455	2456	70.32	2457	70.32	2458	70.32	2459	70.32	
2460	2461	70.32	2462	70.32	2463	70.32	2464	70.32	
2465	2466	70.32	2467	70.32	2468	70.32	2469	70.32	
2470	2471	70.32	2472	70.32	2473	70.32	2474	70.32	
2475	2476	70.32	2477	70.32	2478	70.32	2479	70.32	
2480	2481	70.32	2482	70.32	2483	70.32	2484	70.32	
2485	2486	70.32	2487	70.32	2488	70.32	2489	70.32	
2490	2491	70.32	2492	70.32	2493	70.32	2494	70.32	
2495	2496	70.32	2497	70.32	2498	70.32	2499	70.32	
2500	2501	70.32	2502	70.32	2503	70.32	2504	70.32	
2505	2506	70.32	2507	70.32	2508	70.32	2509	70.32	
2510	2511	70.32	2512	70.32	2513	70.32	2514	70.32	
2515	2516	70.32	2517	70.32	2518	70.32	2519	70.32	
2520	2521	70.32	2522	70.32	2523	70.32	2524	70.32	
2525	2526	70.32	2527	70.32	2528	70.32	2529	70.32	
2530	2531	70.32	2532	70.32	2533	70.32	2534	70.32	
2535	2536	70.32	2537	70.32	2538	70.32	2539	70.32	
2540	2541	70.32	2542	70.32	2543	70.32	2544	70.32	
2545	2546	70.32	2547	70.32	2548	70.32	2549	70.32	
2550	2551	70.32	2552	70.32	2553	70.32	2554	70.32	
2555	2556	70.32	2557	70.32	2558	70.32	2559	70.32	
2560	2561	70.32	2562	70.32	2563	70.32	2564	70.32	
2565	2566	70.32	2567	70.32	2568	70.32	2569	70.32	
2570	2571	70.32	2572	70.32	2573	70.32	2574	70.32	
2575	2576	70.32	2577	70.32	2578	70.32	2579	70.32	
2580	2581	70.32	2582	70.32	2583	70.32	2584	70.32	
2585	2586	70.32	2587	70.32	2588	70.32	2589	70.32	
2590	2591	70.32	2592	70.32	2593	70.32	2594	70.32	
2595	2596	70.32	2597	70.32	2598	70.32	2599	70.32	
2600	2601	70.32	2602	70.32	2603	70.32	2604	70.32	
2605	2606	70.32	2607	70.32	2608	70.32	2609	70.32	
2610	2611	70.32	2612	70.32	2613	70.32	2614	70.32	
2615	2616	70.32	2617	70.32	2618	70.32	2619	70.32	
2620	2621	70.32	2622	70.32	2623	70.32	2624	70.32	
2625	2626	70.32	2627	70.32	2628	70.32	2629	70.32	
2630	2631	70.32	2632	70.32	2633	70.32	2634	70.32	
2635	2636	70.32	2637	70.32	2638	70.32	2639	70.32	
2640	2641	70.32	2642	70.32	2643	70.32	2644	70.32	
2645	2646	70.32	2647	70.32	2648	70.32	2649	70.32	
2650	2651	70.32	2652	70.32	2653	70.32	2654	70.32	
2655	2656	70.32	2657	70.32	2658	70.32	2659	70.32	
2660	2661	70.32	2662	70.32	2663	70.32	2664	70.32	
2665	2666	70.32	2667	70.32	2668	70.32	2669	70.32	
2670	2671	70.32	2672	70.32	2673	70.32	2674	70.32	
2675	2676	70.32	2677	70.32	2678	70.32	2679	70.32	
2680	2681	70.32	2682	70.32	2683	70.32	2684	70.32	
2685	2686	70.32	2687	70.32	2688	70.32	2689	70.32	
2690	2691	70.32	2692	70.32	2693	70.32	2694	70.32	
2695	2696	70.32	2697	70.32	2698	70.32	2699	70.32	
2700	2701	70.32	2702	70.32	2703	70.32	2704	70.32	
2705	2706	70.32	2707	70.32	2708	70.32	2709	70.32	
2710	2711	70.32	2712	70.32	2713	70.32	2714	70.32	
2715	2716	70.32	2717	70.32	2718	70.32	2719	70.32	
2720	2721	70.32	2722	70.32	2723	70.32	2724	70.32	
2725	2726	70.32	2727	70.32	2728	70.32	2729	70.32	
2730	2731	70.32	2732	70.32	2733	70.32	2734	70.32	
2735	2736	70.32	2737	70.32	2738	70.32	2739	70.32	
2740	2741	70.32	2742	70.32	2743	70.32	2744	70.32	
2745	2746	70.32	2747	70.32	2748	70.32	2749	70.32	
2750	2751	70.32	2752	70.32	2753	70.32	2754	70.32	
2755	2756	70.32	2757	70.32	2758	70.32	2759	70.32	
2760	2761	70.32	2762	70.32	2763	70.32	2764	70.32	
2765	2766	70.32	2767	70.32	2768	70.32	2769	70.32	
2770	2771	70.32	2772	70.32	2773	70.32	2774	70.32	
2775	2776	70.32	2777	70.32	2778	70.32	2779	70.32	

ABAGUS VERSION 4-4-67										DATE22-FEB-84			TIME18 05 51			PAGE 23		
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			1 INCREMENT 11					
2566	70 77	2567	70 31	2569	70 15	2570	71 83	2571	69 69									
2572	68 34	2575	69 89	2576	73 69	2577	81 42	2578	71 55									
2579	69 40	2580	70 44	2583	69 78	2584	73 41	2585	77 05									
2586	70 02	2587	69 83	2588	69 38	2590	70 32	2591	72 94									
2592	59 62	2606	2889	2608	963 7	2610	1778	2611	2889									
2612	2893	2613	960 9	2614	964 8	2615	1777	2616	2893									
2617	960 2	2619	2895	2621	968 7	2623	1781	2624	2895									
2625	2897	2626	965 7	2627	967 6	2628	1781	2629	2897									
2630	962 8	2632	2901	2634	975 1	2636	1783	2637	2901									
2638	2903	2639	972 1	2640	993 1	2641	1783	2642	2903									
2643	988 7	2655	196 3	2657	660 2	2659	261 1	2662	292 4									
2663	165 1	2664	165 3	2665	307 8	2666	419 0	2667	227 3									
2669	225 1	2670	162 9	2671	254 6	2676	185 7	2678	648 7									
2680	247 2	2683	278 1	2684	157 2	2685	155 2	2686	286 2									
2687	400 9	2688	213 1	2690	211 3	2691	155 3	2692	234 9									
2697	176 0	2699	644 0	2701	244 2	2704	267 2	2705	149 9									
2706	161 2	2707	273 1	2708	406 4	2709	210 3	2711	199 0									
2712	161 2	2713	236 8	2730	601 9	2732	495 7	2734	410 9									
2737	314 1	2738	251 5	2739	359 3	2740	158 8	2741	251 5									
2742	245 7	2744	162 6	2745	198 9	2746	121 9	2751	586 6									
2753	483 3	2755	391 2	2758	299 0	2759	232 6	2760	342 1									
2761	149 0	2762	241 2	2763	225 5	2765	152 1	2766	184 0									
2767	115 4	2772	578 1	2773	478 9	2776	376 2	2779	288 8									
2780	221 0	2781	347 2	2782	145 4	2783	248 5	2784	209 3									
2786	143 0	2787	187 5	2788	121 5	2805	468 8	2807	424 6									
2809	230 8	2812	173 5	2813	117 8	2814	203 2	2815	101 7									
2816	142 3	2817	107 5	2819	88 61	2820	94 23	2821	80 16									
2826	433 9	2828	391 2	2830	216 5	2833	156 8	2834	107 2									
2835	184 6	2836	86 51	2837	123 1	2838	102 0	2840	84 09									
2841	86 72	2842	76 85	2847	407 4	2849	372 9	2851	205 9									
2854	141 5	2855	103 0	2856	181 7	2857	84 43	2858	120 0									
2859	95 64	2861	78 65	2862	89 83	2863	78 99	2879	107 9									
2881	97 30	2884	78 12	2885	72 07	2886	66 21	2888	74 25									
2892	91 62	2894	104 3	2897	69 93	2898	69 38	2899	74 42									
2901	71 32	2905	93 73	2907	101 2	2910	70 57	2911	72 09									
2912	68 79	2914	72 10	2926	67 79	2928	71 50	2930	68 78									
2933	70 53	2934	70 64	2935	71 76	2936	69 87	2937	69 19									
2938	70 07	2940	70 08	2941	70 25	2942	69 97	2947	68 32									
2949	71 00	2951	69 25	2954	70 30	2955	70 39	2956	71 55									
2957	69 87	2958	69 32	2959	69 96	2961	70 00	2962	69 93									
2963	70 11	2968	68 05	2970	71 23	2972	68 35	2975	70 44									
2976	70 78	2977	71 54	2978	69 84	2979	69 57	2980	70 08									
2982	69 95	2983	70 20	2984	70 19	2997	2491	2998	2948									
2999	2890	3000	2248	3001	1191	3002	2492	3003	2947									
3004	2891	3005	2251	3006	1186	3007	2495	3008	2891									
3009	1777	3010	1791	3011	2886	3012	2888	3013	1013									

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MACH 14 FLOW RESTRICTOR										STEP 1			INCREMENT 11					
TRANSIENT HEAT TRANSFER ANALYSIS																		
3014	985.6	3015	1791	3016	2885	3017	2888	3018	1013									
3019	983.1	3020	1792	3021	2887	3022	978.1	3023	2076									
3033	2066.	3034	2057	3035	627.3	3036	2241.	3037	1199									
3038	2059.	3041	2072	3042	2042.	3043	599.6	3044	2237.									
3045	1194.	3046	2019	3048	2101.	3049	582.9	3050	1196.									
3051	482.8	3054	460.7	3055	327.5	3056	291.8	3057	1006.									
3058	989.0	3059	437.0	3062	477.8	3063	287.7	3064	260.3									
3065	1001.	3066	984.4	3067	331.2	3069	549.7	3070	244.9									
3071	983.6	3084	2490	3085	2948	3086	2890.	3089	2492.									
3090	2948.	3091	2890.	3094	2492.	3095	2890	3097	1791.									
3098	2886.	3099	2887.	3102	1793.	3103	2886.	3104	2887.									
3107	1794.	3108	2887.	3117	2498.	3118	2948.	3119	2890.									
3120	2240	3121	1210	3122	2491.	3123	2948.	3124	2890.									
3125	2239	3126	1200	3130	1792	3131	2886.	3132	2886.									
3133	1003.	3134	974.3	3135	1791.	3136	2886.	3137	2887.									
3138	1008.	3139	984.1	3150	2592	3151	2957.	3152	2889.									
3153	2489	3154	1212	3155	2583	3156	2952.	3157	2888.									
3158	2314.	3159	1410	3163	1826.	3164	2885.	3165	2883.									
3166	1118.	3167	970.3	3168	1904	3169	2887.	3170	2884.									
3171	1107.	3172	1112	3183	2933.	3184	2894.	3185	2899.									
3186	2673	3187	2878.	3188	2962.	3189	2884.	3190	2722.									
3191	2125.	3195	2624.	3196	2890.	3197	2888.	3198	2273.									
3204	2114.	3200	2410.	3201	2888.	3202	2886.	3203	1460.									
3223	1621.	3215	1903.	3218	1669.	3219	574.3	3220	1863.									
3231	397.2	3224	526.1	3225	1808.	3227	455.3	3228	818.1									
3238	336.0	3232	379.3	3233	630.8	3236	219.5	3237	286.1									
3254	2947.	3240	133.1	3249	2947.	3251	2252.	3253	2495.									
3259	2890.	3255	2890	3256	2252.	3257	1174.	3258	2495.									
3267	2885	3260	1169	3262	2886.	3264	1006.	3266	1791.									
3272	2887.	3268	2887.	3269	1004.	3270	975.4	3271	1791.									
3292	2048.	3273	971.1	3285	2032.	3287	2143.	3289	2008.									
3297	1997.	3293	2019	3294	535.9	3295	2046.	3296	772.1									
3308	706.1	3299	2032	3300	527.9	3301	642.6	3306	259.2									
3316	367.0	3310	294.4	3313	351.8	3314	223.7	3315	192.8									
3322	291.0	3317	452.4	3318	259.3	3320	286.4	3321	188.6									
3347	2039.	3339	2129.	3341	2105.	3343	2087.	3346	2062.									
3353	2027.	3348	723.3	3349	2047.	3350	645.7	3351	2042.									
3364	475.9	3354	590.3	3355	560.2	3360	531.6	3362	531.6									
3371	271.1	3367	370.3	3368	311.9	3369	391.1	3370	196.2									
3393	2157.	3372	312.7	3374	212.5	3375	228.6	3376	134.7									
3402	675.6	3395	2595.	3397	2091.	3400	2319.	3401	2132.									
3408	570.9	3403	2570	3404	585.7	3405	2113.	3407	2361.									
3421	246.5	3409	494.5	3414	507.7	3416	472.4	3418	277.6									
3426	135.3	3422	135.3	3423	232.0	3424	148.9	3425	172.8									
3448	1788	3428	131.0	3429	108.8	3430	90.48	3446	1584.									
		3451	1566	3452	438.0	3453	1783.	3455	441.4									

ABAQUS VERSION 4-4-67									
MACH 14 FLOW RESTRICTOR									
TRANSIENT HEAT TRANSFER ANALYSIS									
3459	114.9	3461	176.1	3464	48.73	3465	63.22	3466	146.1
3468	67.80	3476	2115	3477	2517	3478	2316	3479	1940
3480	1178	3481	2115	3482	2511	3483	2312	3484	1938
3485	1180	3486	2115	3487	2303	3488	1185	3489	1303
3490	2732	3491	2890	3492	850.8	3493	1003	3494	1288
3495	2719	3496	2902	3497	861.1	3498	969.2	3499	1267
3500	2919	3501	916.1	3510	2508	3512	1935	3514	2115
3515	2508	3516	2299	3517	1933	3518	1189	3519	2114
3520	2300	3521	1189	3523	2705	3525	871.0	3527	1258
3528	2698	3529	2922	3530	876.2	3531	888.3	3532	1257
3533	2919	3534	885.8						

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TIME 13 33 56

DATE 24-FEB-84

ABAQUS VERSION 4-4-67

## ABAQUS INPUT ECHO

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
CARD 5	*HEADING MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS CONTINUATION OF M14FR401 RUN *RESTART, READ, WRITE, STEP=1, INC=10, ENDSTEP *STEP, INC=100 TRANSIENT HEAT TRANSFER ANALYSIS *HEAT TRANSFER, TEMTOL=50. 0, DELMAX=500 0, END=SS 0. 1. 2. 5. 0. 05. 0. 3. 10. 0 *FILM, DP=NEW FSUR1, F2NU HOL13, F3NU HOL14, F4NU HOL16, F6NU FSUR2, F2NU HOL2, F6NU HOL3, F6NU HOL4, F6NU HOL5, F6NU HOL6, F6NU HOL7, F6NU RSUR1, F1NU FLNG1, F6NU FLNG2, F6NU RSUR2, F1NU *NODE PRINT, FREQ=10 2.2.1.1.1.1.1.1 *NODE FILE, NSET=NALL 2.2.1.1.1.1.1.1 *END STEP															
CARD 10																
CARD 15																
CARD 20																
CARD 25																
CARD 30																

ABRUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR

DATE 24-FEB-84 TIME 13 33 06 PAGE 6

R E S T A R T   C O N D I T I O N

RESTART FILE WILL BE WRITTEN EVERY 1 INCREMENTS

RESTART IS MADE FROM STEP 1 INCREMENT 10 AT TIME 0 5701

NEXT INCREMENT WILL BE STEP 2 INCREMENT 1

ABAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE24-FEB-84  
TIME13 46.15  
PAGE 1  
STEP 2 INCREMENT 1

## STEP 2 TRANSIENT HEAT TRANSFER ANALYSIS

## TRANSIENT HEAT TRANSFER

AUTOMATIC CONTROL WITH -  
 A SUGGESTED INITIAL TIME INCREMENT OF 0.100  
 AND A TOTAL TIME PERIOD OF 2.50  
 THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02  
 THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300  
 THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500.  
 THE CONVERGENCE TOLERANCE MEASURES ARE -  
 TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0  
 THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE  
 CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0  
 MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100  
 MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

THE FILE OUTPUT WILL NOT BE A CONTINUATION OF THE PREVIOUS FILE  
 BECAUSE THAT FILE WAS NOT MADE AVAILABLE

INCREMENT NUMBER 1 ATTEMPT NUMBER 1  
 TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 76.7 AND OCCURS AT NODE 1322

ABAGUS VERSION 4-4-67 DATE24-FEB-84 TIME13 46 15 PAGE 2

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2 INCREMENT 1

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -2.63 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.100 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 4.000E-02  
TOTAL ACCUMULATED TIME IS 0.670  
TOTAL HEAT TIME IS 0.670

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 1

INCREMENT NUMBER 2 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 51.8 AND OCCURS AT NODE 1322  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.73 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.200 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 8.000E-02  
TOTAL ACCUMULATED TIME IS 0.770  
TOTAL HEAT TIME IS 0.770

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 2

INCREMENT NUMBER 3 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 37.3 AND OCCURS AT NODE 1322



ABAGUS VERSION 4-4-67

DATE 24-FEB-84 TIME 13:46:15 PAGE 3

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2 INCREMENT 3

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.300 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 0.120  
 TOTAL ACCUMULATED TIME IS 0.870  
 TOTAL HEAT TIME IS 0.870

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 3

INCREMENT NUMBER 4 ATTEMPT NUMBER 1  
 TIME INCREMENT = 0.100

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 26.8 AND OCCURS AT NODE 1322

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.400 , TIME INCREMENT COMPLETED IS 0.100 , FRACTION OF STEP IS 0.160  
 TOTAL ACCUMULATED TIME IS 0.970  
 TOTAL HEAT TIME IS 0.970

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 4

INCREMENT NUMBER 5 ATTEMPT NUMBER 1  
 TIME INCREMENT = 0.200

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 44.2 AND OCCURS AT NODE 1317

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.600 , TIME INCREMENT COMPLETED IS 0.200 , FRACTION OF STEP IS 0.240  
 TOTAL ACCUMULATED TIME IS 1.17  
 TOTAL HEAT TIME IS 1.17

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE: 24-FEB-84      TIME: 13:46:15      PAGE 4  
STEP 2 INCREMENT 5

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 5

INCREMENT NUMBER 6 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.200

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -43.0 AND OCCURS AT NODE 1571

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.800 . TIME INCREMENT COMPLETED IS 0.200 . FRACTION OF STEP IS 0.320  
TOTAL ACCUMULATED TIME IS 1.37  
TOTAL HEAT TIME IS 1.37

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 6

INCREMENT NUMBER 7 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.200MAXIMUM TEMPERATURE CHANGE IN THIS INCREMENT IS -1.065E+03 AND OCCURS AT NODE 535  
THIS EXCEEDS THE TOLERANCE SPECIFIED  
THE INCREMENT WILL BE RECYCLED WITH A TIME INCREMENT OF 5.633E-02INCREMENT NUMBER 7 ATTEMPT NUMBER 2  
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -18.4 AND OCCURS AT NODE 1571

ABAQUS VERSION 4-4-67  
 MACH 14 FLOW RESTRICTOR  
 TRANSIENT HEAT TRANSFER ANALYSIS

DATE 24-FEB-84  
 TIME 13 46 15  
 STEP 2 INCREMENT 7  
 PAGE 5

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.856  
 TOTAL ACCUMULATED TIME IS 1.43  
 TOTAL HEAT TIME IS 1.43

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 7

INCREMENT NUMBER 8  
 TIME INCREMENT = 5.633E-02  
 ATTEMPT NUMBER 1

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -22.4 AND OCCURS AT NODE 1237

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.913  
 TOTAL ACCUMULATED TIME IS 1.48  
 TOTAL HEAT TIME IS 1.48

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 8

INCREMENT NUMBER 9  
 TIME INCREMENT = 5.633E-02  
 ATTEMPT NUMBER 1

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -37.0 AND OCCURS AT NODE 1422

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 0.969  
 TOTAL ACCUMULATED TIME IS 1.54  
 TOTAL HEAT TIME IS 1.54

MINI IN FLOW RESISTANCE  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2 INCREMENT 9

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 9

INCREMENT NUMBER 10 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -48.1 AND OCCURS AT NODE 1422

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	1505.	2	1847	3	1502.	4	1506.	5	1831.
6	1497	7	1510	8	1785.	9	1511.	10	1523.
11	2148.	12	1519.	13	1523.	14	2149.	15	1518.
16	1519	17	2120.	18	1530.	19	1490.	20	1926.
21	1486.	22	1489.	23	1936.	24	1487.	25	1482.
26	1937.	27	1497.	28	1127.	29	108.7	30	83.08
31	985.9	32	108.6	33	83.13	34	667.6	35	98.85
36	85.78	37	1448.	38	399.0	39	373.3	40	1320.
41	400.8	42	372.6	43	1016.	44	394.4	45	374.3
46	1819	47	1639	48	1637.	49	1796.	50	1641.
51	1636.	52	1743	53	1640.	54	1636.	58	1510.
59	1708.	60	1850	61	1514.	62	1661.	63	1803.

ABAGUS VERSION 4-4-67																									DATE 24-FEB-84					TIME 13 46 15					PAGE 7																																																																																																																																																																																																																																																																																																																																																																																																														
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS																									STEP					2 INCREMENT					10																																																																																																																																																																																																																																																																																																																																																																																																														
67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500
1515	2131	1936	1521	2013	1486	1460	368.6	1089	1803	87.11	381.5	1712	1636	1500	1835	1845	91.44	518.0	76.64	89.52	1810	1752	1710	1822	1042	545.3	861.3	74.93	81.97	1885	1880	1601	1638	1242	1880	1656	1159	1880	1785	1074	1801	1685	1526	2072	1956	1492	1167	1940	1878	1197	1490	1482	1712	89.40	602.9	1637	1530	1812	1840	1644	784.2	74.56	96.76	1810	1486	1518	1254	1659	1648	1699	321.8	75.45	233.9	1885	1867	1784	1774	1293	1880	1887	1434	1628	1879	1607	789.9	1747	903.5	1519	1909	1479	1519	1556	1931	963.2	1526	1483	384.3	85.91	380.8	1683	1813	1454	1854	1848	89.59	1019	76.98	1373	1854	1647	1286	1400	971.8	1704	288.4	74.58	80.00	1884	1883	1569	1639	1620	1775	1588	1131	1830	1584	1537	1845	1616	762.0	70	78	84	92	99	107	114	122	129	139	144	152	160	165	170	175	180	194	199	204	221	229	234	251	258	275	282	301	306	314	328	333	338	343	348	356	364	369	377	384	392	407	414	422	429	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500																																																																																																																																																																																											

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MACH 14 FLOW RESTRICTOR		TRANSIENT HEAT TRANSFER ANALYSIS		STEP		INCREMENT 10	
432	395.5	433	1461.	435	1458	439	1479
445	1481	447	1479	469	1453	471	1453
475	1440	477	1440	479	1439	481	1412
485	1412	487	1452.	489	1452.	491	1453
495	1441.	497	1440.	499	1411	501	1412
505	1449	507	1451.	511	1438	513	1414.
510	1413	523	1446	525	1447.	529	1410.
535	1403.	537	1404.	541	1446.	542	1436.
544	1422.	547	1434	548	1481.	549	1446
553	1405.	555	1403	579	1453.	581	1678
587	1437.	591	1411.	593	1453.	585	1437.
617	1460.	619	1460.	621	1411.	613	1460.
627	1452	629	1461	631	1460.	623	1452.
637	1459	639	1459	641	1460.	633	1460.
647	1451.	649	1462	651	1460.	643	1460.
661	1448.	663	1450	665	1460.	655	1450
675	1457.	679	1449	681	1447.	669	1459
688	1602.	691	1468.	692	1473.	685	1463
697	1451.	698	1673.	699	1703.	693	1463
706	2018.	708	1968.	710	1450.	700	1769.
716	1016	718	872.0	720	1686.	712	2019.
729	1460	731	1460	735	1452	723	714
744	1886.	748	876.7	750	561.7	725	1206.
757	1881.	758	2107	759	1452	737	1460.
762	2104	763	1626	764	1452	740.2	1910.
767	1641	768	2271	777	1885.	754	756
780	2095	783	1630	784	2348.	760	211.7
799	1448	800	1610	801	1878.	765	1882.
804	1606.	805	1447	806	2248	778	2314.
809	1447	810	1632	823	1448.	785	1877
826	1593	827	1447	828	1633.	802	2244
831	1446.	832	1617	833	1447.	808	1448.
848	1516.	849	1446.	850	1609.	803	1633
855	1445.	856	1601	871	1446.	825	1446
874	1492	877	1441	878	1580.	830	1622
895	1443	896	1586.	897	1443.	847	1445.
902	1544	903	1441.	904	1489.	854	1445.
924	411.4	926	754.2	928	1443.	880	1502.
946	1601	947	1448	948	1443.	901	1441.
953	1447	954	1627	969	1527.	922	647.6
972	160.5	975	641.2	976	643.6	945	1448.
995	1260.	998	1224	1001	1600.	952	1628
1010	1190.	1022	90.90	1023	948	971	296.1
1028	78.52	1029	73.39	1031	948	978	163.5
1035	71.01	1037	73.58	1038	1001	1007	1236.
1043	84.68	1044	70.88	1046	1175	1026	72.35
					1270.	1034	78.59
					1004	1041	70.57
					1025	1070	1091.
					87.70		
					70.74		
					87.43		
					71.80		
					77.15		
					71.87		
					80.22		
					71.71		
					77.15		

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MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			2 INCREMENT			10		
1071	1363	1073	1061	1074	1240	1079	1106	1080	1376									
1082	1077	1083	1242	1106	1268	1107	1025	1109	1063									
1110	731.1	1115	1277	1116	1041	1118	1044	1119	738.9									
1142	827.9	1145	484.3	1151	816.7	1154	457.5	1169	71.77									
1170	73.06	1172	70.79	1173	72.14	1178	70.59	1179	71.58									
1181	70.40	1182	70.98	1187	72.46	1188	71.78	1190	71.79									
1191	71.22	1201	1846	1203	1504	1203	1516	1204	1891									
1205	1845	1206	2067	1207	1502	1208	1515	1209	1841									
1210	1506	1211	1518	1212	1857	1213	1811	1214	2058									
1215	1497	1216	1512	1217	1830	1218	1521	1219	1797									
1220	2019	1221	1522	1222	2093	1223	1519	1224	1550									
1225	2149	1226	2151	1227	2355	1228	1525	1229	1545									
1230	2110	1231	1516	1232	1534	1233	2107	1234	2141									
1235	2361	1236	1520	1237	1543	1238	2151	1239	1562									
1240	2011	1241	2343	1242	1535	1243	1932	1244	1486									
1245	1968	1246	1930	1247	1491	1248	1931	1249	1480									
1250	1947	1251	1942	1252	1490	1253	1997	1254	1878									
1255	1462	1256	1459	1257	1472	1258	1086	1259	1823									
1260	1418	1261	1465	1262	1467	1263	839.4	1264	1140									
1265	1246	1266	1497	1267	806.9	1268	1692	1269	1474									
1270	1519	1271	1411	1272	1855	1273	1676	1274	1470									
1275	1515	1276	1183	1277	1780	1278	1556	1279	1555									
1280	1599	1281	1830	1282	1477	1283	1811	1284	1855									
1285	1471	1286	1774	1287	1854	1288	289.8	1291	92.55									
1292	104.9	1293	151.1	1294	85.20	1295	138.7	1296	252.8									
1299	91.48	1300	101.1	1301	151.8	1302	85.71	1303	138.4									
1304	186.0	1306	88.08	1307	144.6	1308	140.0	1309	619.4									
1312	383.6	1313	397.7	1314	1175	1315	374.3	1316	1167									
1317	575.8	1320	383.1	1321	394.8	1322	1176	1323	374.7									
1324	1167	1325	493.2	1327	380.1	1328	1169	1329	1169									
1330	1689	1332	1636	1333	1640	1334	1636	1335	1677									
1337	1637	1338	1640	1339	1636	1340	1660	1341	1637									
1343	1513	1346	1733	1348	1749	1350	1797	1351	1512									
1352	1518	1353	1790	1354	1675	1355	1971	1356	1829									
1357	1999	1358	1785	1359	1524	1360	1782	1361	1927									
1362	2029	1364	1520	1367	2095	1369	1880	1371	2147									
1372	1514	1373	1562	1374	2093	1375	2067	1376	2330									
1377	2130	1378	2201	1379	2157	1380	1570	1381	2123									
1382	2304	1383	2301	1385	1482	1387	1937	1388	1772									
1389	2009	1390	1477	1391	1497	1392	1945	1393	1968									
1394	2025	1395	1945	1396	1497	1399	1486	1400	1760									
1401	1511	1402	1660	1403	1492	1404	1833	1407	1663									
1408	1681	1409	1930	1410	1321	1411	1706	1412	1728									
1414	1397	1415	1820	1416	1386	1417	1520	1420	1510									
1421	1919	1422	1539	1423	1859	1424	1530	1425	2061									
1428	1936	1429	2006	1430	2189	1431	1690	1432	2094									

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TRANSIENT HEAT TRANSFER ANALYSIS							
1433	2064	1435	1774	1436	2197	1437	1955
1440	1490	1441	1824	1442	1447	1443	1908
1446	1942	1447	1886	1448	1957	1449	1904
1453	1460	1454	1533	1455	1469	1456	1389
1461	1078	1462	902.8	1463	1380	1464	562.2
1466	932.4	1468	517.6	1469	875.4	1470	475.3
1474	1470	1475	1772	1476	1510	1477	1639
1482	1416	1483	1275	1484	1485	1485	919.2
1487	1321	1489	886.5	1490	1644	1491	1389
1494	1471	1495	1869	1496	1820	1497	1851
1500	1808	1501	1740	1502	1823	1503	1740
1509	593.4	1512	305.6	1513	487.4	1514	330.9
1520	829.7	1522	943.3	1525	643.5	1526	1401
1529	1317	1532	1705	1533	1723	1535	1693
1541	102.8	1543	82.33	1545	134.5	1548	85.55
1550	138.7	1551	84.74	1552	139.9	1553	113.6
1556	139.8	1557	138.0	1562	396.9	1564	371.4
1569	376.3	1570	384.3	1571	1167	1572	374.7
1574	411.7	1576	376.1	1577	1168	1578	1167
1583	1634	1584	1651	1586	1636	1587	1582
1589	1643	1590	1636	1591	1604	1592	1588
1594	1813	1595	1849	1596	1804	1597	1593
1599	1814	1600	1848	1601	1804	1602	1452
1604	1818	1605	1440	1606	1454	1607	1456
1609	1819	1610	1439	1611	1454	1612	1603
1614	1819	1615	1455	1616	1763	1617	1608
1620	1434	1621	1413	1623	1433	1624	1613
1628	1523	1629	1620	1630	1805	1631	1618
1635	1635	1636	1476	1637	1591	1638	1627
1640	1534	1642	1624	1643	1542	1644	1636
1648	1766	1649	1717	1650	1747	1651	1639
1653	1730	1656	1743	1657	1670	1658	1750
1660	1774	1661	1679	1663	1740	1664	1840
1678	1794	1679	1453	1680	1454	1682	1659
1685	1455	1688	1802	1689	1454	1683	1655
1693	1453	1696	1814	1697	1455	1691	1684
1702	1454	1704	1435	1705	1441	1698	1453
1710	1433	1711	1753	1712	1450	1707	1692
1715	1748	1716	1783	1717	1452	1713	1701
1720	1815	1724	1777	1725	1452	1718	1412
1728	1710	1729	1800	1730	1441	1719	1746
1733	1722	1737	1433	1738	1411	1731	1719
1744	1719	1745	1447	1746	1449	1740	1796
1749	1726	1750	1434	1749	1449	1741	1841
1757	1751	1758	1434	1759	1452	1752	1732
1762	1752	1763	1437	1764	1449	1765	1741
							1413
							1681
							1684
							1753
							1661
							1645
							1765



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MACH 14 FLOW RESTRICTOR									
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STEP	2	INCREMENT	10						
1770	1436	1771	1408	1773	1436	1774	1407	1777	1708
1778	1446	1779	1449	1780	1623	1781	1659	1782	1711
1783	1446	1784	1449	1785	1635	1786	1658	1790	1739
1791	1434	1792	1451	1793	1680	1794	1638	1795	1741
1796	1433	1797	1450	1798	1690	1799	1633	1803	1434
1804	1405	1806	1435	1807	1406	1810	1276	1813	869.2
1814	959.7	1815	1213	1818	658.8	1819	834.7	1820	1039
1822	553.8	1823	1377	1826	981.6	1827	1068	1828	1315
1831	752.1	1832	931.4	1833	1144	1835	623.5	1843	226.7
1846	79.13	1847	86.90	1848	94.74	1849	75.20	1850	74.38
1851	200.3	1854	78.24	1855	84.32	1856	93.24	1857	74.89
1858	74.67	1859	149.4	1861	75.76	1862	86.23	1863	75.94
1864	256.2	1867	83.86	1868	93.72	1869	104.0	1870	78.83
1871	78.65	1872	225.0	1875	82.87	1876	90.97	1877	103.5
1878	78.78	1879	78.72	1880	164.8	1882	80.09	1883	95.29
1884	80.44	1888	1452	1900	1812	1902	1803	1903	1452
1904	1456	1905	1811	1906	1843	1907	1803	1908	1456
1909	1842	1911	1438	1913	1855	1915	1820	1916	1436
1917	1456	1918	1855	1919	1751	1920	1820	1921	1456
1922	1732	1924	1410	1926	1433	1927	1411	1929	1433
1934	1409	1936	1711	1938	1491	1941	1497	1942	1348
1943	1456	1944	1525	1945	1682	1946	1457	1948	1453
1949	1424	1950	1564	1955	1595	1957	1799	1959	1638
1962	1658	1963	1525	1964	1620	1965	1682	1966	1797
1967	1611	1969	1619	1970	1577	1971	1736	1988	1656
1990	1496	1992	1581	1995	1393	1996	1376	1997	1579
1998	1056	1999	1323	2000	1414	2002	1118	2003	1359
2004	982.7	2009	1746	2011	1598	2013	1727	2016	1545
2017	1533	2018	1695	2019	1188	2020	1443	2021	1572
2023	1253	2024	1517	2025	1113	2042	1328	2044	1207
2046	1111	2049	858.8	2050	705.4	2051	1030	2052	434.7
2053	804.7	2054	727.9	2056	394.8	2057	583.7	2058	302.4
2063	1433	2065	1312	2067	1247	2070	973.5	2071	803.1
2072	1130	2073	495.5	2074	900.9	2075	826.4	2077	452.0
2078	673.9	2079	350.7	2095	386.2	2097	474.6	2100	232.4
2101	308.1	2102	247.9	2104	218.5	2108	441.2	2110	543.4
2113	264.5	2114	357.2	2115	281.7	2117	250.1	2129	82.71
2131	73.22	2133	109.9	2136	74.01	2137	78.21	2138	79.03
2139	73.58	2140	76.53	2141	95.68	2143	73.75	2144	77.50
2145	76.20	2150	89.36	2152	76.75	2154	119.3	2157	78.19
2158	83.37	2159	84.86	2160	77.29	2161	82.45	2162	103.3
2164	77.77	2165	84.17	2166	81.51	2179	1702	2180	1452
2181	1450	2182	1640	2183	1620	2184	1701	2185	1451
2186	1450	2187	1639	2188	1618	2189	1700	2190	1450
2191	1616	2192	1688	2193	1448	2194	1447	2195	1611
2196	1610	2197	1688	2198	1447	2199	1447	2200	1610

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2201	1609	2202	1687	2203	1447	2204	1607	2205	1701
2206	1447	2207	1450	2208	1635	2209	1697	2210	1701
2211	1446	2212	1450	2213	1635	2214	1696	2215	1700
2216	1450	2217	1694	2225	1425	2228	1430	2229	1321
2230	1289	2231	1629	2232	1620	2233	1392	2236	1413
2237	1285	2238	1252	2239	1613	2240	1602	2241	1313
2243	1420	2244	1201	2245	1608	2246	1371	2249	1376
2250	1231	2251	1247	2252	1601	2253	1610	2254	1338
2257	1363	2258	1198	2259	1213	2260	1586	2261	1594
2262	1260	2264	1372	2265	1165	2266	1599	2267	1383
2270	1389	2271	1261	2272	1351	2273	1625	2274	1697
2275	1351	2278	1378	2279	1211	2280	1320	2281	1611
2282	1682	2283	1276	2285	1389	2286	1275	2287	1685
2300	1694	2301	1452	2302	1448	2305	1695	2306	1452
2307	1448	2310	1700	2311	1449	2313	1681	2314	1448
2315	1446	2318	1682	2319	1448	2320	1446	2323	1686
2324	1446	2326	1694	2327	1447	2328	1448	2331	1695
2332	1447	2333	1448	2336	1699	2337	1449	2346	1653
2347	1449	2348	1446	2349	1575	2350	1522	2351	1683
2352	1431	2353	1448	2354	1622	2355	1590	2359	1643
2360	1445	2361	1444	2362	1551	2363	1519	2364	1671
2365	1447	2366	1445	2367	1594	2368	1581	2372	1655
2373	1444	2374	1446	2375	1574	2376	1599	2377	1683
2378	1446	2379	1448	2380	1616	2381	1663	2392	1636
2393	1445	2394	1445	2395	1519	2396	1476	2397	1632
2398	1446	2399	1444	2400	1534	2401	1505	2405	1614
2406	1441	2407	1442	2408	1479	2409	1466	2410	1621
2411	1442	2412	1442	2413	1505	2414	1488	2418	1626
2419	1441	2420	1443	2421	1492	2422	1536	2423	1632
2424	1442	2425	1443	2426	1520	2427	1548	2438	1612
2439	1448	2440	1445	2441	1678	2442	1621	2443	1627
2444	1446	2445	1445	2446	1597	2447	1596	2451	1599
2452	1440	2453	1441	2454	1582	2455	1557	2456	1606
2457	1441	2458	1442	2459	1525	2460	1533	2464	1616
2465	1440	2466	1443	2467	1542	2468	1554	2469	1619
2470	1440	2471	1443	2472	1513	2473	1545	2484	1398
2487	979.2	2488	846.9	2489	1281	2492	723.7	2493	723.7
2494	966.6	2496	462.3	2497	1213	2500	726.7	2501	745.0
2502	1119	2505	533.3	2506	634.4	2507	868.7	2509	403.5
2510	1153	2513	721.7	2514	803.5	2515	1077	2518	532.9
2519	690.3	2520	871.5	2522	448.1	2530	198.3	2533	73.91
2534	82.14	2535	96.47	2536	75.76	2537	66.52	2538	176.2
2541	72.98	2542	81.36	2543	92.64	2544	73.81	2545	67.51
2546	134.8	2548	70.67	2549	82.28	2550	69.79	2551	189.1
2554	73.41	2555	75.61	2556	85.02	2557	72.85	2558	69.60
2559	168.4	2562	72.73	2563	75.20	2564	82.82	2565	71.86

ABAQUS VERSION 4-4-67										DATE24-FEB-84			TIME13.46.15			PAGE 13			
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			2 INCREMENT			10			
2566	69 95	2567	128.9	2569	70 98	2570	76.42	2571	70.94										
2572	181 0	2575	74 23	2576	82 09	2577	91.30	2578	72.79										
2579	69 82	2580	161 9	2583	73.49	2584	79 70	2585	88.97										
2586	72 00	2587	70.14	2588	125.8	2590	71.54	2591	81.39										
2592	71.34	2606	1431	2608	1633	2610	1699	2611	1431										
2612	1449	2613	1630	2614	1611	2615	1698	2616	1449										
2617	1609	2619	1448	2621	1605	2623	1686	2624	1447										
2625	1447	2626	1602	2627	1603	2628	1685	2629	1447										
2630	1602	2632	1447	2634	1631	2636	1700	2637	1446										
2638	1450	2639	1629	2640	1690	2641	1699	2642	1450										
2643	1650	2655	1196	2657	1519	2659	1266	2662	1290										
2649	1136	2664	1118	2665	1339	2666	1385	2667	1230										
2669	1249	2670	1089	2671	1268	2676	1129	2678	1479										
2680	1212	2683	1230	2684	1067	2685	1081	2686	1276										
2687	1355	2688	1176	2690	1183	2691	1051	2692	1226										
2697	1144	2699	1497	2701	1230	2704	1244	2705	1083										
2706	1194	2707	1281	2708	1454	2709	1194	2711	1195										
2712	1163	2713	1320	2730	1468	2732	1302	2734	1397										
2737	1212	2738	1209	2739	1290	2740	898.8	2741	1043										
2742	1253	2744	973.9	2745	1092	2746	753.2	2751	1427										
2753	1267	2755	1340	2758	1158	2759	1144	2760	1258										
2761	843.6	2762	1020	2763	1181	2765	908.6	2766	1049										
2767	722.8	2772	1442	2774	1287	2776	1349	2779	1170										
2780	1147	2781	1351	2782	854.4	2783	1110	2784	1181										
2786	912.3	2787	1134	2788	800.1	2805	1216	2807	1122										
2809	987.9	2812	831.2	2813	685.1	2814	858.2	2815	507.4										
2816	705.5	2817	678.1	2819	477.4	2820	519.7	2821	335.1										
2826	1160	2828	1053	2830	925.1	2833	744.9	2834	602.8										
2835	810.8	2836	412.7	2837	644.3	2838	602.3	2840	379.9										
2841	461.8	2842	270.2	2847	1155	2849	1047	2851	927.7										
2854	724.6	2855	583.0	2856	862.2	2857	377.1	2858	672.6										
2859	591.0	2861	344.6	2862	484.1	2863	264.7	2879	411.8										
2881	481.3	2884	240.5	2885	252.9	2886	299.6	2888	177.8										
2892	304.8	2894	393.0	2897	183.1	2898	223.6	2899	223.4										
2901	159.3	2905	306.1	2907	386.2	2910	185.3	2911	251.6										
2912	212.8	2914	179.8	2926	79.57	2928	70.98	2930	102.6										
2933	69.43	2934	74.63	2935	74.40	2936	70.82	2937	70.88										
2938	89.96	2940	69.55	2941	72.68	2942	70.62	2947	74.67										
2949	70.30	2951	97.96	2954	69.96	2955	71.96	2956	72.01										
2957	70.46	2958	71.24	2959	86.40	2961	70.02	2962	71.37										
2963	70.80	2968	71.50	2970	70.41	2972	96.75	2975	70.42										
2976	73.77	2977	74.67	2978	70.60	2979	72.18	2980	85.69										
2982	70.44	2983	73.28	2984	71.89	2997	1830	2998	1460										
2999	1480	3000	1885	3001	2021	3002	1829	3003	1460										
3004	1480	3005	1883	3006	2020	3007	1828	3008	1480										
3009	2018	3010	1795	3011	1460	3012	1456	3013	1786										

ABABUS VERSION 4-4-67									
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS									
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STEP 2 INCREMENT 10									
3014	1682	3015	1795	3016	1460	3017	1456	3018	1785
3019	1680	3020	1793	3021	1456	3022	1456	3030	1897
3033	1901	3034	1884	3035	1948	3036	1883	3037	2020
3038	1893	3041	1893	3042	1873	3043	1928	3044	1878
3045	2007	3046	1884	3048	1885	3049	1897	3050	2011
3051	1664	3054	1659	3055	1594	3056	1416	3057	1778
3058	1684	3059	1638	3062	1650	3063	1545	3064	1380
3065	1762	3066	1645	3067	1576	3069	1448	3070	1329
3071	1671	3084	1828	3085	1460	3086	1479	3089	1828
3090	1460	3091	1479	3094	1829	3095	1480	3097	1789
3098	1460	3099	1454	3102	1789	3103	1460	3104	1454
3107	1793	3108	1455	3117	1819	3118	1460	3119	1479
3120	1872	3121	1960	3122	1826	3123	1460	3124	1479
3125	1883	3126	2004	3130	1751	3131	1458	3132	1452
3133	1730	3134	1582	3135	1780	3136	1459	3137	1454
3138	1774	3139	1655	3150	1715	3151	1454	3152	1479
3153	1777	3154	1933	3155	1777	3156	1458	3157	1478
3158	1853	3159	1930	3163	1743	3164	1455	3165	1453
3166	1683	3167	1559	3168	1727	3169	1454	3170	1451
3171	1697	3172	1579	3183	1472	3184	1478	3185	1527
3186	1623	3187	1540	3188	1448	3189	1483	3190	1647
3191	1851	3195	1591	3196	1464	3197	1455	3198	1726
3199	1684	3200	1661	3201	1458	3202	1455	3203	1769
3204	1699	3215	2074	3218	2032	3219	2001	3220	2042
3223	1991	3224	1880	3225	1978	3227	1617	3228	1812
3231	1682	3232	1479	3233	1669	3234	1385	3237	1300
3238	1316	3240	889.3	3249	1460	3251	1882	3253	1828
3254	1460	3255	1480	3256	1880	3257	2014	3258	1828
3259	1480	3260	2014	3262	1460	3264	1779	3266	1792
3267	1460	3268	1455	3269	1775	3270	1669	3271	1791
3272	1455	3273	1667	3285	1858	3287	1893	3289	1875
3292	1874	3293	1848	3294	1855	3295	1890	3296	1969
3297	1871	3299	1871	3300	1840	3301	1938	3306	1487
3308	1717	3310	1537	3313	1559	3314	1438	3315	1251
3316	1607	3317	1494	3318	1510	3320	1532	3321	1224
3322	1401	3339	1889	3341	1842	3343	1891	3346	1859
3347	1867	3348	1931	3349	1806	3350	1795	3351	1878
3353	1825	3354	1854	3355	1657	3360	1480	3362	1541
3364	1644	3367	1489	3368	1502	3369	1406	3370	1233
3371	1157	3372	1945	3374	1307	3375	1231	3376	892.7
3393	1853	3395	1654	3397	1820	3400	1739	3401	1768
3402	1720	3403	1620	3404	1657	3405	1769	3407	1688
3408	1568	3409	1496	3414	1500	3416	1425	3418	1313
3421	1199	3422	1092	3423	1010	3424	957.8	3425	890.2
3426	1077	3428	936.4	3429	705.3	3430	549.1	3446	1931
3448	1913	3451	1892	3452	1393	3453	1887	3455	1315

## ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

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STEP 2 INCREMENT 10

3459	1006.	3461	893 5	3464	778 2	3465	531 8	3466	729 6
3468	396 7	3476	2036.	3477	1881.	3478	1968.	3479	2109.
3480	2303.	3481	2031.	3482	1885.	3483	1966.	3484	2105.
3485	2293.	3486	2025.	3487	1963.	3488	2274.	3489	2306.
3490	1638.	3491	1515.	3492	2331.	3493	2301.	3494	2312.
3495	1634.	3496	1507.	3497	2295.	3498	2315.	3499	2306.
3500	1499.	3501	2294.	3510	1881.	3512	2100.	3514	2021.
3515	1877.	3516	1958.	3517	2096.	3518	2260.	3519	2019.
3520	1955.	3521	2258.	3523	1633.	3525	2260.	3527	2290.
3528	1629.	3529	1501.	3530	2244.	3531	2258.	3532	2282.
3533	1503.	3534	2242.						

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 10

INCREMENT NUMBER 11 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -59 2 AND OCCURS AT NODE 1237  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.05 AND OCCURS AT NODE 1237

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.08 TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.433  
TOTAL ACCUMULATED TIME IS 1.65  
TOTAL HEAT TIME IS 1.65

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 11

INCREMENT NUMBER 12 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.633E-02

ABRAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

DATE 24-FEB-84      TIME 13 46 15      PAGE 16

STEP 2      INCREMENT 12

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -68.1      AND OCCURS AT NODE 1417  
THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.48      AND OCCURS AT NODE 1237

## CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.14      TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.455  
TOTAL ACCUMULATED TIME IS 1.71  
TOTAL HEAT TIME IS 1.71

ABAQUS VERSION 4-4-67

DATE 27-FEB-84 TIME 15 45 45 PAGE 2

## ABAQUS INPUT ECHO

	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
*HEADING																
MACH 14 FLOW RESTRICTOR																
TRANSIENT HEAT TRANSFER ANALYSIS																
CONTINUATION OF M14FR402 RUN																
*RESTART, READ, WRITE, STEP=2, INC=11																
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80

CARD 5

ABAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE 27-FEB-84      TIME 17:37:43      PAGE 1  
STEP 2      INCREMENT 1

## STEP 2      TRANSIENT HEAT TRANSFER ANALYSIS

## TRANSIENT HEAT TRANSFER

AUTOMATIC CONTROL WITH -  
 A SUGGESTED INITIAL TIME INCREMENT OF 0.100  
 AND A TOTAL TIME PERIOD OF 2.50  
 THE MINIMUM TIME INCREMENT ALLOWED IS 5.000E-02  
 THE MAXIMUM TIME INCREMENT ALLOWED IS 0.300

THE MAXIMUM TEMPERATURE CHANGE ALLOWED PER INCREMENT IS 500

THE CONVERGENCE TOLERANCE MEASURES ARE -  
 TEMPERATURE CORRECTIONS BETWEEN ITERATIONS 50.0

THE STEP IS TERMINATED IF THE LARGEST TEMPERATURE  
 CHANGE RATE IN AN INCREMENT IS LESS THAN 10.0  
 MAXIMUM NUMBER OF INCREMENTS ALLOWED IS 100  
 MAXIMUM NUMBER OF ITERATIONS ALLOWED IS 6

THE FILE OUTPUT WILL NOT BE A CONTINUATION OF THE PREVIOUS FILE  
 BECAUSE THAT FILE WAS NOT MADE AVAILABLE

INCREMENT NUMBER 12      ATTEMPT NUMBER 1  
 TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -68.1      AND OCCURS AT NODE 1417



ABAQUS VERSION 4-4-67      DATE 27-FEB-84      TIME 17:37:43      PAGE 2

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2 INCREMENT 12

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.48 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.14 . TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.455  
TOTAL ACCUMULATED TIME IS 1.71  
TOTAL HEAT TIME IS 1.71

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 12

INCREMENT NUMBER 13 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -93.5 AND OCCURS AT NODE 1422

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -3.30 AND OCCURS AT NODE 1236

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.19 . TIME INCREMENT COMPLETED IS 5.633E-02, FRACTION OF STEP IS 0.478  
TOTAL ACCUMULATED TIME IS 1.76  
TOTAL HEAT TIME IS 1.76

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 13

INCREMENT NUMBER 14 ATTEMPT NUMBER 1  
TIME INCREMENT = 5.633E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -62.0 AND OCCURS AT NODE 1236

ABAGUS VERSION 4-4-67 DATE 27-FEB-84 TIME 17 37 43 PAGE 3

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

STEP 2 INCREMENT 14

THIS EXCEEDS TOLERANCE

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -1.73 AND OCCURS AT NODE 1237

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.25  
TOTAL ACCUMULATED TIME IS 1.82  
TOTAL HEAT TIME IS 1.82

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 14

INCREMENT NUMBER 15 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.113

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -37.6 AND OCCURS AT NODE 1337

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.36  
TOTAL ACCUMULATED TIME IS 1.93  
TOTAL HEAT TIME IS 1.93

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 15

INCREMENT NUMBER 16 ATTEMPT NUMBER 1  
TIME INCREMENT = 0.113

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE -23.2 AND OCCURS AT NODE 1341

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 1.48  
TOTAL ACCUMULATED TIME IS 2.05  
TOTAL HEAT TIME IS 2.05

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE: 27-FEB-84      TIME: 17 37 43      PAGE      4  
STEP      2      INCREMENT      16

RESTART INFORMATION WRITTEN IN STEP      2      AFTER INCREMENT      16

INCREMENT NUMBER      17      ATTEMPT NUMBER      1  
TIME INCREMENT =      0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE      24.9      AND OCCURS AT NODE 1277

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP      1.70      TIME INCREMENT COMPLETED IS      0.225      FRACTION OF STEP IS      0.681  
TOTAL ACCUMULATED TIME IS      2.27  
TOTAL HEAT TIME IS      2.27

RESTART INFORMATION WRITTEN IN STEP      2      AFTER INCREMENT      17

INCREMENT NUMBER      18      ATTEMPT NUMBER      1  
TIME INCREMENT =      0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE      15.7      AND OCCURS AT NODE 1277

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP      1.93      TIME INCREMENT COMPLETED IS      0.225      FRACTION OF STEP IS      0.771  
TOTAL ACCUMULATED TIME IS      2.50  
TOTAL HEAT TIME IS      2.50

RESTART INFORMATION WRITTEN IN STEP      2      AFTER INCREMENT      18

ABAQUS VERSION 4-4-67  
 MACH 14 FLOW RESTRICTOR  
 TRANSIENT HEAT TRANSFER ANALYSIS

DATE 27 FEB 84 TIME 17 37 43 PAGE 5  
 STEP 2 INCREMENT 19

INCREMENT NUMBER 19 ATTEMPT NUMBER 1  
 TIME INCREMENT = 0.225

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 9.61 AND OCCURS AT NODE 1374

#### CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.15 , TIME INCREMENT COMPLETED IS 0.225 , FRACTION OF STEP IS 0.861  
 TOTAL ACCUMULATED TIME IS 2.72  
 TOTAL HEAT TIME IS 2.72

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 19

INCREMENT NUMBER 20 ATTEMPT NUMBER 1  
 TIME INCREMENT = 0.300

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 8.46 AND OCCURS AT NODE 1375

#### CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.45 , TIME INCREMENT COMPLETED IS 0.300 , FRACTION OF STEP IS 0.981  
 TOTAL ACCUMULATED TIME IS 3.02  
 TOTAL HEAT TIME IS 3.02

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE: 27 FEB-84      TIME: 17 37 43      PAGE 6  
STEP 2 INCREMENT 20

## NODE POINT OUTPUT SET ALL

## TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	353.3	2	862.3	3	349.1	4	354.4	5	886.1
6	348.9	7	355.5	8	909.7	9	350.7	10	335.7
11	739.9	12	331.7	13	336.4	14	764.7	15	332.4
16	334.9	17	794.0	18	332.7	19	305.3	20	391.2
21	305.2	22	305.1	23	397.6	24	305.3	25	302.2
26	406.4	27	305.4	28	543.4	29	246.0	30	168.5
31	556.1	32	237.9	33	167.1	34	567.1	35	218.9
36	163.9	37	660.4	38	598.6	39	536.7	40	696.1
41	593.0	42	535.3	43	760.3	44	579.7	45	531.9
46	401.6	47	421.2	48	413.8	49	413.1	50	420.8
51	413.5	52	434.6	53	420.0	54	412.7	58	357.0
59	955.5	60	706.0	61	358.3	62	965.7	63	790.2
67	336.1	68	849.6	69	613.5	70	336.1	71	865.2
72	708.4	76	302.7	77	425.0	78	372.1	79	301.5
80	429.4	81	398.8	83	341.5	84	338.1	86	704.7
87	721.5	89	789.0	90	790.6	92	330.3	93	331.2
95	640.6	96	716.0	98	758.0	99	845.7	101	306.7
102	306.3	104	380.9	105	402.8	107	414.0	108	443.6
110	330.1	111	330.0	113	707.3	114	665.7	116	730.6
117	603.5	119	329.2	120	326.3	122	772.3	123	790.6
125	884.0	126	844.4	128	306.8	129	301.6	131	422.0
132	433.7	134	463.8	135	463.1	139	552.5	140	201.3
141	160.8	142	540.4	143	194.0	144	159.6	148	802.6
149	565.7	150	528.9	151	814.0	152	559.8	153	527.7
157	455.5	158	418.4	159	412.1	160	461.5	161	417.8
162	411.8	163	727.1	164	974.1	165	724.4	166	728.1
167	988.0	168	725.5	169	730.2	170	1004.	171	705.6
172	635.8	173	930.1	174	636.8	175	636.1	176	948.0
177	639.6	178	637.4	179	966.2	180	622.0	190	542.5
191	179.3	192	107.1	193	540.8	194	171.7	195	106.0
196	522.1	197	153.8	198	103.4	199	541.9	200	205.8
201	130.2	202	547.0	203	197.9	204	129.0	205	541.5

MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										DATE 27-FEB-84				TIME 17 37 43				PAGE 7			
										STEP				2 INCREMENT							
206	179 5	207	126 1	220	732 4	221	1038	222	853 3												
223	733 7	224	1046	225	891 5	229	640 5	230	1003												
231	791 8	232	641 0	233	1016	234	845 2	245	664 1												
246	610 1	248	815 1	249	777 2	251	851 1	252	796 7												
254	589 6	255	549 7	257	769 8	258	754 3	260	822 2												
261	793 5	272	550 4	273	509 0	275	715 1	276	642 7												
278	689 3	279	534 0	281	502 0	282	464 3	284	713 8												
285	651 8	287	708 0	288	565 0	301	483 8	302	136 8												
303	101 2	304	461 8	305	129 9	306	100 3	310	512 8												
311	161 9	312	123 4	313	496 0	314	154 4	315	122 6												
325	460 8	326	523 5	327	460 8	328	461 0	329	530 0												
330	462 9	331	460 8	332	536 3	333	459 3	334	786 6												
335	977 2	336	784 7	337	787 7	338	993 5	339	788 7												
340	789 7	341	1010	342	775 4	343	787 2	344	992 2												
345	784 0	346	788 3	347	1006	348	785 4	349	790 4												
350	1020	351	766 5	355	461 7	356	547 7	357	502 5												
358	461 9	359	550 2	360	515 2	364	792 1	365	1040												
366	900 9	367	793 3	368	1047	369	936 7	373	792 4												
374	1048	375	893 6	376	793 6	377	1053	378	924 4												
380	451 5	381	444 7	383	499 6	384	504 1	386	516 0												
387	513 2	389	748 2	390	728 5	392	888 0	393	908 9												
395	933 4	396	961 3	398	724 9	399	674 1	401	856 5												
402	824 5	404	885 6	405	840 5	407	419 4	408	366 0												
410	486 3	411	388 2	413	485 1	414	394 5	416	688 0												
417	721 2	419	916 5	420	925 6	422	972 9	423	970 2												
425	611 8	426	606 1	428	784 8	429	750 3	431	792 3												
432	727 8	433	324 0	435	324 4	439	326 3	441	326 9												
445	305 9	447	306 3	449	315 1	471	315 0	473	315 1												
475	310 5	477	310 5	479	310 0	481	307 0	483	306 9												
485	307 3	487	314 8	489	315 5	491	315 5	493	310 7												
495	311 7	497	311 0	499	308 4	501	309 3	503	308 3												
505	311 2	507	313 1	511	308 2	513	310 4	517	306 2												
519	307 1	523	307 5	525	309 1	529	304 7	531	306 9												
535	303 3	537	304 7	541	306 7	542	485 3	543	306 8												
544	489 6	547	304 6	548	448 4	549	304 8	550	451 9												
553	303 0	555	302 8	579	315 3	581	315 1	585	309 5												
587	309 6	591	307 7	593	307 5	613	307 0	615	307 0												
617	307 2	619	322 9	621	322 9	623	323 1	625	321 9												
627	321 8	629	322 0	631	307 1	633	307 3	635	307 2												
637	322 6	639	323 4	641	323 3	643	321 1	645	322 1												
647	322 1	649	306 7	651	306 6	655	320 6	657	321 2												
661	317 1	663	319 1	667	306 7	669	306 4	673	321 4												
675	320 2	679	314 3	681	315 3	685	310 7	687	306 0												
688	334 0	691	320 3	692	442 1	693	320 2	694	536 2												
697	313 8	698	473 2	699	314 0	700	313 6	704	578 2												
706	594 8	708	616 5	710	849 8	712	895 5	714	964 2												

MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										DATE: 27-FEB-84			TIME: 17 37 43			PAGE 8		
													STEP 2			INCREMENT 20		
716	634.3	718	636.4	720	623.0	723	307.2	725	307.3									
729	323.3	731	323.4	735	322.2	737	322.2	742	307.5									
744	629.9	748	987.1	750	982.1	754	578.9	756	549.9									
757	381.5	758	510.9	759	382.1	760	511.6	761	382.3									
762	512.6	763	339.6	764	689.9	765	343.4	766	688.9									
767	349.5	768	688.4	777	382.4	778	512.6	779	382.5									
780	511.9	783	352.7	784	686.0	785	353.1	786	684.6									
799	320.2	800	775.9	801	320.1	802	776.8	803	320.3									
804	778.6	805	319.2	806	782.8	807	319.2	808	783.7									
809	319.3	810	785.5	823	319.3	824	751.2	825	320.3									
826	772.2	827	320.4	828	772.4	829	318.4	830	756.3									
831	319.4	832	778.2	833	319.5	834	778.8	835	314.8									
848	641.4	849	317.2	850	704.5	853	313.9	854	642.4									
855	316.4	856	708.4	871	310.5	872	538.4	873	312.2									
874	569.5	877	309.5	878	529.3	879	311.3	880	569.7									
895	309.5	896	461.5	897	309.7	898	481.4	901	308.5									
902	479.6	903	308.7	904	490.5	920	538.3	922	530.0									
924	494.6	926	531.0	928	522.7	930	489.5	945	530.4									
946	780.4	947	320.4	948	781.6	951	319.5	952	787.1									
953	319.4	954	788.3	969	640.4	970	438.9	971	564.9									
972	410.1	975	625.6	976	435.4	977	519.6	978	407.7									
995	986.1	998	998.6	1001	1010.0	1004	1008.0	1007	1020.0									
1010	1032.0	1022	136.7	1023	79.56	1025	131.0	1026	78.53									
1028	117.0	1029	76.50	1031	135.2	1032	78.98	1034	128.7									
1035	78.04	1037	113.3	1038	76.00	1040	145.0	1041	82.96									
1043	138.6	1044	81.97	1046	123.1	1047	79.88	1049	1036.0									
1071	877.8	1073	1040.0	1074	905.4	1079	1057.0	1080	891.2									
1082	1062.0	1083	919.9	1106	830.3	1107	774.9	1109	850.0									
1110	772.9	1115	841.5	1116	781.6	1118	860.6	1119	777.5									
1142	707.8	1145	681.3	1151	704.1	1154	663.4	1159	777.5									
1170	74.87	1172	97.14	1173	74.23	1178	98.76	1179	74.25									
1181	93.04	1182	73.59	1187	108.0	1188	78.12	1190	102.0									
1191	77.45	1201	735.0	1202	350.9	1203	334.4	1204	743.1									
1205	868.7	1206	766.8	1207	351.9	1208	331.3	1209	761.6									
1210	351.0	1211	335.5	1212	738.2	1213	901.4	1214	793.1									
1215	353.7	1216	333.8	1217	826.2	1218	335.3	1219	699.3									
1220	825.3	1221	330.3	1222	636.1	1223	332.7	1224	326.3									
1225	636.6	1226	746.1	1227	643.7	1228	334.8	1229	323.6									
1230	662.6	1231	331.5	1232	327.2	1233	336.9	1234	782.2									
1235	662.7	1236	338.1	1237	325.1	1238	726.5	1239	328.4									
1240	608.8	1241	687.7	1242	324.2	1243	382.3	1244	304.3									
1245	384.0	1246	392.3	1247	306.0	1248	389.7	1249	302.5									
1250	384.0	1251	402.7	1252	307.0	1253	408.1	1254	374.2									
1255	476.6	1256	322.2	1257	320.2	1258	548.7	1259	592.4									
1260	496.4	1261	324.3	1262	321.1	1263	563.3	1264	617.2									
1265	551.5	1266	320.9	1267	657.0	1268	533.1	1269	323.9									

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STEP 2 INCREMENT 20									
1270	323 1	1271	671 4	1272	645 5	1273	565 1	1274	323 9
1275	323 2	1276	727 8	1277	677 7	1278	649 8	1279	325 7
1280	740 7	1281	370 8	1282	305 4	1283	403 8	1284	381 2
1285	303 0	1286	423 2	1287	406 5	1288	432 9	1289	175 8
1292	246 1	1293	399 8	1294	166 4	1295	317 5	1296	416 4
1299	174 0	1300	239 9	1301	391 9	1302	165 0	1303	316 5
1304	372 9	1306	170 0	1307	372 6	1308	314 2	1309	725 6
1312	541 4	1313	600 0	1314	665 5	1315	534 5	1316	616 6
1317	717 5	1320	539 9	1321	587 9	1322	661 0	1323	533 0
1324	616 2	1325	692 9	1327	536 9	1328	649 8	1329	615 4
1330	447 9	1332	414 1	1333	422 1	1334	413 3	1335	446 6
1337	413 9	1338	420 9	1339	412 9	1340	441 9	1341	413 4
1343	335 8	1346	931 7	1348	556 0	1350	856 6	1351	356 1
1352	335 0	1353	838 4	1354	966 0	1355	888 8	1356	774 4
1357	627 5	1358	887 9	1359	336 6	1360	873 0	1361	902 3
1362	725 8	1364	334 5	1367	823 3	1369	488 8	1371	760 9
1372	334 4	1373	328 8	1374	736 2	1375	863 9	1376	733 3
1377	687 1	1378	544 4	1379	792 1	1380	330 1	1381	771 1
1382	747 3	1383	622 3	1385	302 1	1387	415 9	1388	345 0
1389	417 3	1390	301 4	1391	401 3	1392	429 3	1393	395 1
1394	426 0	1395	409 3	1396	346 3	1399	340 2	1400	563 4
1401	330 4	1402	580 4	1403	328 4	1404	698 9	1407	714 7
1408	768 7	1409	642 1	1410	780 1	1411	698 7	1412	782 4
1414	794 2	1415	758 4	1416	815 3	1417	332 2	1420	330 7
1421	505 8	1422	323 2	1423	558 3	1424	325 0	1425	614 9
1428	675 9	1429	721 5	1430	571 5	1431	808 7	1432	646 2
1433	720 0	1435	802 8	1436	674 7	1437	763 2	1438	306 2
1440	306 5	1441	352 4	1442	368 5	1443	371 8	1445	390 2
1446	405 5	1447	434 0	1448	400 9	1449	428 3	1450	334 4
1453	328 6	1454	574 3	1455	325 3	1456	548 6	1458	720 1
1461	689 3	1462	746 5	1463	727 4	1464	661 7	1465	721 5
1466	770 7	1468	674 8	1469	811 5	1470	725 7	1471	330 9
1474	327 7	1475	596 9	1476	323 9	1477	605 3	1479	749 7
1482	785 8	1483	863 5	1484	709 1	1485	858 2	1486	739 5
1487	875 2	1489	874 5	1490	817 0	1491	810 4	1492	306 9
1494	304 3	1495	383 3	1496	385 6	1497	414 0	1499	429 8
1500	456 8	1501	464 8	1502	456 9	1503	466 9	1507	558 4
1509	622 8	1512	541 4	1513	673 2	1514	569 9	1516	672 0
1520	783 5	1522	818 3	1525	808 4	1526	781 0	1527	826 7
1529	793 1	1532	446 1	1533	452 3	1535	459 7	1536	461 6
1541	209 0	1543	162 7	1545	324 7	1548	166 2	1549	195 0
1550	353 4	1551	160 9	1552	312 1	1553	304 2	1555	164 5
1556	345 9	1557	311 2	1562	571 4	1564	530 9	1566	664 4
1569	533 8	1570	560 0	1571	640 0	1572	529 2	1573	614 2
1574	651 5	1576	532 3	1577	635 9	1578	613 8	1582	418 9
1583	412 5	1584	437 3	1586	412 8	1587	417 4	1588	412 2



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1589	434.8	1590	412.6	1591	552.8	1592	315.6	1593	314.2	1594	315.6	1595	314.2	1596	314.2	1597	314.2	1598	314.2
1594	726.3	1595	693.2	1596	553.1	1597	315.6	1598	314.2	1599	315.6	1600	314.2	1601	314.2	1602	314.2	1603	314.2
1604	479.8	1605	310.9	1606	305.2	1607	305.1	1608	304.8	1609	305.1	1610	304.8	1611	304.8	1612	304.8	1613	304.8
1614	479.9	1615	310.7	1616	305.1	1617	305.1	1618	304.8	1619	305.1	1620	304.8	1621	304.8	1622	304.8	1623	304.8
1620	480.8	1621	305.7	1622	302.3	1623	302.3	1624	301.9	1625	302.3	1626	301.9	1627	301.9	1628	301.9	1629	301.9
1628	302.4	1629	308.8	1630	301.9	1631	301.9	1632	301.9	1633	301.9	1634	301.9	1635	301.9	1636	301.9	1637	301.9
1635	909.2	1636	997.5	1637	726.9	1638	721.4	1639	721.4	1640	721.4	1641	721.4	1642	721.4	1643	721.4	1644	721.4
1640	961.6	1641	887.5	1642	985.5	1643	675.8	1644	675.8	1645	675.8	1646	675.8	1647	675.8	1648	675.8	1649	675.8
1648	835.6	1649	934.9	1650	879.7	1651	640.0	1652	640.0	1653	640.0	1654	640.0	1655	640.0	1656	640.0	1657	640.0
1653	854.5	1654	834.1	1655	958.1	1656	899.6	1657	899.6	1658	899.6	1659	899.6	1660	899.6	1661	899.6	1662	899.6
1660	533.8	1661	898.8	1662	814.6	1663	814.6	1664	814.6	1665	814.6	1666	814.6	1667	814.6	1668	814.6	1669	814.6
1678	538.9	1679	314.9	1680	313.9	1681	313.9	1682	313.9	1683	313.9	1684	313.9	1685	313.9	1686	313.9	1687	313.9
1685	314.7	1686	551.8	1687	314.7	1688	314.7	1689	314.7	1690	314.7	1691	314.7	1692	314.7	1693	314.7	1694	314.7
1693	306.1	1694	479.7	1695	311.1	1696	311.1	1697	311.1	1698	311.1	1699	311.1	1700	311.1	1701	311.1	1702	311.1
1702	306.2	1703	301.1	1704	307.5	1705	307.5	1706	307.5	1707	307.5	1708	307.5	1709	307.5	1710	307.5	1711	307.5
1710	301.6	1711	483.7	1712	312.2	1713	312.2	1714	312.2	1715	312.2	1716	312.2	1717	312.2	1718	312.2	1719	312.2
1715	588.6	1716	515.3	1717	314.0	1718	314.0	1719	314.0	1720	314.0	1721	314.0	1722	314.0	1723	314.0	1724	314.0
1720	637.5	1721	432.9	1722	309.3	1723	309.3	1724	309.3	1725	309.3	1726	309.3	1727	309.3	1728	309.3	1729	309.3
1728	472.1	1729	454.4	1730	310.3	1731	310.3	1732	310.3	1733	310.3	1734	310.3	1735	310.3	1736	310.3	1737	310.3
1733	503.8	1734	301.2	1735	306.6	1736	306.6	1737	306.6	1738	306.6	1739	306.6	1740	306.6	1741	306.6	1742	306.6
1744	426.6	1745	308.4	1746	307.3	1747	307.3	1748	307.3	1749	307.3	1750	307.3	1751	307.3	1752	307.3	1753	307.3
1749	450.6	1750	310.1	1751	308.7	1752	308.7	1753	308.7	1754	308.7	1755	308.7	1756	308.7	1757	308.7	1758	308.7
1757	391.0	1758	305.6	1759	303.2	1760	303.2	1761	303.2	1762	303.2	1763	303.2	1764	303.2	1765	303.2	1766	303.2
1762	408.2	1763	307.5	1764	303.3	1765	303.3	1766	303.3	1767	303.3	1768	303.3	1769	303.3	1770	303.3	1771	303.3
1770	301.2	1771	304.5	1772	301.3	1773	301.3	1774	301.3	1775	301.3	1776	301.3	1777	301.3	1778	301.3	1779	301.3
1778	306.9	1779	306.3	1780	484.8	1781	484.8	1782	484.8	1783	484.8	1784	484.8	1785	484.8	1786	484.8	1787	484.8
1783	307.3	1784	306.5	1785	494.9	1786	494.9	1787	494.9	1788	494.9	1789	494.9	1790	494.9	1791	494.9	1792	494.9
1791	304.9	1792	302.4	1793	447.9	1794	447.9	1795	447.9	1796	447.9	1797	447.9	1798	447.9	1799	447.9	1800	447.9
1796	304.8	1797	302.3	1798	454.0	1799	454.0	1800	454.0	1801	454.0	1802	454.0	1803	454.0	1804	454.0	1805	454.0
1804	303.7	1805	301.4	1806	304.0	1807	304.0	1808	304.0	1809	304.0	1810	304.0	1811	304.0	1812	304.0	1813	304.0
1814	541.9	1815	548.4	1816	534.3	1817	534.3	1818	534.3	1819	534.3	1820	534.3	1821	534.3	1822	534.3	1823	534.3
1822	530.6	1823	514.0	1824	545.0	1825	545.0	1826	545.0	1827	545.0	1828	545.0	1829	545.0	1830	545.0	1831	545.0
1831	546.7	1832	548.7	1833	566.2	1834	566.2	1835	566.2	1836	566.2	1837	566.2	1838	566.2	1839	566.2	1840	566.2
1846	115.7	1847	178.7	1848	191.0	1849	191.0	1850	191.0	1851	191.0	1852	191.0	1853	191.0	1854	191.0	1855	191.0
1851	346.0	1852	114.1	1853	163.7	1854	163.7	1855	163.7	1856	163.7	1857	163.7	1858	163.7	1859	163.7	1860	163.7
1858	116.1	1859	300.2	1860	110.3	1861	110.3	1862	110.3	1863	110.3	1864	110.3	1865	110.3	1866	110.3	1867	110.3
1864	392.8	1865	138.7	1866	205.4	1867	205.4	1868	205.4	1869	205.4	1870	205.4	1871	205.4	1872	205.4	1873	205.4
1871	147.0	1872	375.5	1873	137.0	1874	137.0	1875	137.0	1876	137.0	1877	137.0	1878	137.0	1879	137.0	1880	137.0
1878	127.2	1879	145.7	1880	330.0	1881	330.0	1882	330.0	1883	330.0	1884	330.0	1885	330.0	1886	330.0	1887	330.0
1884	142.6	1885	315.3	1886	731.1	1887	731.1	1888	731.1	1889	731.1	1890	731.1	1891	731.1	1892	731.1	1893	731.1
1904	314.6	1905	732.5	1906	696.3	1907	696.3	1908	696.3	1909	696.3	1910	696.3	1911	696.3	1912	696.3	1913	696.3
1909	697.0	1910	310.1	1911	638.3	1912	638.3	1913	638.3	1914	638.3	1915	638.3	1916	638.3	1917	638.3	1918	638.3
1917	306.5	1918	640.0	1919	522.7	1920	522.7	1921	522.7	1922	522.7	1923	522.7	1924	522.7	1925	522.7	1926	522.7
1922	523.1	1923	307.7	1924	301.6	1925	301.6	1926	301.6	1927	301.6	1928	301.6	1929	301.6	1930	301.6	1931	301.6

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MACH 14 FLOW RESTRICTOR									
TRANSIENT HEAT TRANSFER ANALYSIS									
1934	1022	1936	789.8	1938	981.4	1941	956.5	1942	1045
1943	1021	1944	887.3	1945	827.1	1946	999.0	1948	972.7
1949	1031	1950	871.5	1955	986.8	1957	710.9	1959	922.7
1962	906.4	1963	1014	1964	975.0	1965	836.6	1966	745.1
1967	944.8	1969	927.2	1970	985.0	1971	820.2	1988	755.3
1990	715.1	1992	832.3	1995	798.5	1996	845.9	1997	795.2
1998	802.1	1999	767.1	2000	869.1	2002	828.7	2003	838.3
2004	795.8	2009	683.8	2011	662.8	2013	776.5	2016	763.7
2017	811.4	2018	729.0	2019	792.3	2020	730.6	2021	829.3
2023	812.4	2024	807.4	2025	794.6	2042	660.5	2044	607.6
2046	749.7	2049	679.6	2050	719.7	2051	714.6	2052	604.3
2053	646.7	2054	750.6	2056	616.0	2057	698.4	2058	548.8
2063	624.3	2065	585.5	2067	738.2	2070	684.0	2071	731.9
2072	704.1	2073	630.0	2074	655.0	2075	759.6	2077	642.5
2078	721.3	2079	584.8	2095	501.7	2097	571.8	2100	466.2
2101	497.2	2102	495.6	2104	477.7	2108	527.7	2110	596.1
2113	498.6	2114	531.6	2115	527.1	2117	516.5	2129	144.1
2131	102.7	2133	251.9	2136	106.6	2137	131.4	2138	147.8
2139	101.2	2140	110.9	2141	231.6	2143	105.0	2144	140.6
2145	110.0	2150	169.1	2152	125.4	2154	281.5	2157	129.3
2158	155.9	2159	179.3	2160	123.7	2161	140.0	2162	261.3
2164	127.5	2165	172.0	2166	138.9	2179	594.9	2180	322.3
2181	320.7	2182	786.5	2183	778.4	2184	595.2	2185	322.5
2186	320.6	2187	779.3	2188	779.3	2189	595.9	2190	320.8
2191	781.2	2192	587.0	2193	320.6	2194	319.8	2195	775.2
2196	778.9	2197	587.2	2198	320.7	2199	319.7	2200	776.2
2201	779.7	2202	587.9	2203	319.9	2204	781.4	2205	592.4
2206	319.7	2207	318.7	2208	782.1	2209	776.9	2210	592.7
2211	319.8	2212	318.7	2213	783.1	2214	777.7	2215	593.3
2216	318.9	2217	779.3	2225	940.5	2228	942.1	2229	995.9
2230	984.9	2231	786.7	2232	775.1	2233	955.9	2236	941.6
2237	1015	2238	998.1	2239	781.6	2240	775.6	2241	992.1
2243	920.2	2244	1011	2245	755.5	2246	933.2	2249	934.7
2250	989.4	2251	995.6	2252	774.5	2253	975.2	2254	947.5
2257	932.5	2258	1006	2259	1008	2260	767.3	2261	774.7
2262	981.0	2264	909.6	2265	1019	2266	753.1	2267	951.9
2270	953.4	2271	1012	2272	1009	2273	780.9	2274	773.5
2275	965.9	2278	950.2	2279	1027	2280	1021	2281	772.7
2282	773.1	2283	999.1	2285	926.0	2286	1033	2287	751.9
2300	580.6	2301	321.5	2302	319.9	2305	591.8	2306	322.0
2307	320.8	2310	593.2	2311	320.9	2313	570.4	2314	319.7
2315	318.9	2318	583.0	2319	320.2	2320	319.9	2323	585.0
2324	320.0	2326	574.5	2327	318.8	2328	318.0	2331	587.8
2332	319.3	2333	319.0	2336	590.0	2337	319.0	2346	525.7
2347	318.1	2348	315.5	2349	700.6	2350	652.4	2351	556.6
2352	320.2	2353	317.8	2354	747.5	2355	710.9	2359	506.0

ABAQUS VERSION 4-4-67										DATE: 27-FEB-84			TIME: 17 37 43			PAGE 12		
MACH 14 FLOW RESTRICTOR										STEP			2			INCREMENT		
TRANSIENT HEAT TRANSFER ANALYSIS																		
2360	316.0	2361	314.3	2362	674.9	2363	639.6	2364	543.3									
2365	318.4	2366	316.8	2367	730.5	2368	705.3	2369	507.8									
2370	315.2	2371	313.6	2372	677.3	2373	641.9	2374	546.5									
2375	317.5	2376	316.0	2377	735.1	2378	704.9	2379	484.4									
2380	314.1	2381	311.8	2382	603.5	2383	559.9	2384	485.9									
2385	315.6	2386	313.2	2387	637.1	2388	584.4	2389	445.2									
2390	311.0	2391	309.9	2392	549.0	2393	528.5	2394	462.4									
2395	313.1	2396	311.7	2397	601.2	2398	566.5	2399	442.0									
2400	310.2	2401	309.3	2402	544.9	2403	530.3	2404	465.3									
2405	312.4	2406	311.2	2407	603.3	2408	572.6	2409	399.3									
2410	313.5	2411	310.9	2412	484.6	2413	459.7	2414	422.6									
2415	313.4	2416	311.1	2417	555.5	2418	487.6	2419	406.2									
2420	309.4	2421	308.8	2422	465.2	2423	445.5	2424	408.1									
2425	309.8	2426	309.0	2427	504.8	2428	481.5	2429	424.6									
2430	308.5	2431	308.3	2432	480.9	2433	462.4	2434	415.9									
2435	308.9	2436	308.5	2437	504.7	2438	492.4	2439	424.6									
2440	636.6	2441	577.9	2442	647.4	2443	634.6	2444	572.7									
2445	686.4	2446	543.6	2447	544.3	2448	537.9	2449	483.3									
2450	555.7	2451	516.4	2452	519.0	2453	507.9	2454	459.3									
2455	539.7	2456	530.1	2457	536.2	2458	515.4	2459	483.3									
2460	530.1	2461	520.9	2462	508.9	2463	501.1	2464	459.3									
2465	137.1	2466	138.7	2467	77.87	2468	77.82	2469	83.92									
2470	82.66	2471	124.2	2472	133.1	2473	117.2	2474	76.79									
2475	270.1	2476	79.65	2477	119.5	2478	77.49	2479	324.0									
2480	84.58	2481	134.4	2482	138.4	2483	121.4	2484	80.07									
2485	303.7	2486	83.24	2487	256.3	2488	257.7	2489	257.8									
2490	79.03	2491	259.9	2492	257.6	2493	257.7	2494	148.9									
2495	323.3	2496	90.08	2497	258.3	2498	259.0	2499	132.9									
2500	80.79	2501	304.7	2502	258.8	2503	258.9	2504	322.4									
2505	87.67	2506	322.2	2507	260.8	2508	261.0	2509	321.0									
2510	321.0	2511	792.6	2512	261.4	2513	261.5	2514	320.6									
2515	784.2	2516	320.5	2517	262.1	2518	262.3	2519	320.6									
2520	320.0	2521	780.6	2522	262.7	2523	262.8	2524	319.7									
2525	784.1	2526	319.5	2527	263.4	2528	263.6	2529	319.7									
2530	319.0	2531	787.2	2532	264.0	2533	264.1	2534	319.0									
2535	782.3	2536	1034.	2537	265.7	2538	265.9	2539	979.3									
2540	1053.	2541	1037.	2542	266.5	2543	266.6	2544	1024.									
2545	992.2	2546	1042.	2547	267.1	2548	267.6	2549	824.3									
2550	992.2	2551	1042.	2552	267.1	2553	267.6	2554	904.1									
2555	882.9	2556	1011.	2557	268.8	2558	269.0	2559	910.6									
2560	1045.	2561	834.3	2562	269.9	2563	270.1	2564	1062.									
2565	1061.	2566	918.8	2567	270.8	2568	270.9	2569	997.6									
2570	1066.	2571	920.8	2572	271.3	2573	271.1	2574	872.3									
2575	842.3	2576	881.5	2577	273.9	2578	274.1	2579	791.6									
2580	902.0	2581	867.5	2582	274.4	2583	274.6	2584	782.3									

ABAQUS VERSION 4-4-67										DATE: 27-FEB-84			TIME: 17 37 43			PAGE 13		
MACH 14 FLOW RESTRICTOR										STEP			2 INCREMENT			20		
TRANSIENT HEAT TRANSFER ANALYSIS																		
2753	729 9	2755	853 1	2758	805 6	2759	851 0	2760	833 3									
2761	786 0	2762	773 4	2763	876 9	2765	817 1	2766	851 5									
2767	768 5	2772	791 3	2774	735 3	2776	866 0	2779	814 8									
2780	862 6	2781	842 9	2782	792 1	2783	788 5	2784	890 1									
2786	824 7	2787	865 5	2788	789 8	2805	727 2	2807	703 1									
2809	806 1	2812	768 6	2813	802 2	2814	735 9	2815	747 7									
2816	678 4	2817	819 2	2819	762 7	2820	723 6	2821	626 0									
2826	666 8	2828	616 7	2830	743 3	2833	674 4	2834	707 5									
2835	699 3	2836	611 4	2837	623 7	2838	731 3	2840	626 1									
2841	663 5	2842	530 9	2847	667 7	2849	609 1	2851	745 5									
2854	665 0	2855	696 9	2856	713 3	2857	581 3	2858	633 8									
2859	725 6	2861	593 9	2862	672 5	2863	519 4	2879	600 0									
2881	684 6	2884	556 6	2885	491 1	2886	644 6	2888	462 4									
2892	464 7	2894	549 2	2897	416 8	2898	428 7	2899	484 9									
2901	400 8	2905	459 6	2907	535 5	2910	414 1	2911	453 1									
2912	460 7	2914	427 8	2926	108 7	2928	76 14	2930	221 6									
2933	76 57	2934	98 60	2935	105 6	2936	74 87	2937	72 21									
2938	201 2	2940	75 26	2941	99 77	2942	71 61	2947	105 1									
2949	75 43	2951	212 7	2954	77 13	2955	94 56	2956	102 7									
2957	74 21	2958	74 91	2959	193 0	2961	75 84	2962	96 94									
2963	74 23	2968	114 7	2970	79 26	2972	211 9	2975	82 06									
2976	103 5	2977	117 4	2978	78 10	2979	85 41	2980	192 4									
2982	80 67	2983	111 1	2984	84 60	2997	401 5	2998	307 2									
2999	319 7	3000	460 3	3001	694 7	3002	401 4	3003	307 4									
3004	319 6	3005	460 1	3006	696 1	3007	401 2	3008	319 7									
3009	699 4	3010	598 7	3011	323 4	3012	323 2	3013	785 8									
3014	801 1	3015	598 9	3016	323 6	3017	323 1	3018	786 9									
3019	802 4	3020	599 5	3021	323 3	3022	805 0	3030	511 0									
3033	512 6	3034	524 7	3035	840 8	3036	462 1	3037	692 3									
3038	517 8	3041	513 7	3042	534 1	3043	854 4	3044	463 7									
3045	696 8	3046	534 0	3048	507 1	3049	869 1	3050	686 9									
3051	930 8	3054	933 3	3055	981 2	3056	1004	3057	788 0									
3058	798 3	3059	947 8	3062	935 2	3063	1004	3064	1020									
3065	787 7	3066	801 1	3067	987 5	3069	917 0	3070	1035									
3071	784 1	3084	399 6	3085	307 1	3086	319 5	3089	401 5									
3090	307 1	3091	320 0	3094	401 4	3095	319 9	3097	590 2									
3098	322 8	3099	322 6	3102	597 9	3103	323 1	3104	323 5									
3107	597 9	3108	323 5	3117	390 4	3118	306 5	3119	317 9									
3120	448 4	3121	654 0	3122	395 3	3123	306 8	3124	318 4									
3125	455 0	3126	667 2	3130	560 5	3131	320 7	3132	319 4									
3133	737 3	3134	713 6	3135	574 8	3136	321 9	3137	320 8									
3138	761 4	3139	749 2	3150	354 5	3151	305 1	3152	318 5									
3153	392 1	3154	661 4	3155	372 1	3156	305 8	3157	318 0									
3158	427 5	3159	612 6	3163	550 5	3164	319 8	3165	317 9									
3166	692 2	3167	671 5	3168	530 6	3169	319 5	3170	318 1									
3171	697 8	3172	659 4	3183	310 0	3184	319 2	3185	315 3									

ABAQUS VERSION 4-4-67		DATE 27-FEB-84		TIME 17:37:43		PAGE 14	
MACH 14 FLOW RESTRICTOR		STEP 2		INCREMENT 20			
TRANSIENT HEAT TRANSFER ANALYSIS							
3184	371.3	3187	320.2	3189	320.1	3190	350.1
3191	484.2	3195	382.3	3197	317.6	3198	463.5
3199	469.6	3200	432.0	3202	317.6	3203	628.1
3204	535.6	3215	527.1	3219	809.4	3220	538.3
3223	606.6	3224	838.9	3227	889.6	3228	765.8
3231	846.3	3232	796.4	3236	933.7	3237	826.5
3238	893.8	3240	861.3	3249	461.2	3253	401.5
3254	307.4	3255	319.9	3257	701.6	3258	401.5
3259	319.9	3260	703.1	3264	790.7	3266	600.3
3267	323.5	3268	323.5	3270	807.4	3271	600.5
3272	323.5	3273	808.8	3285	484.7	3289	541.2
3292	527.7	3293	550.5	3294	513.8	3296	784.1
3297	546.9	3299	532.4	3301	812.0	3306	1026
3308	847.4	3310	1007	3314	1047	3315	1045
3316	931.1	3317	913.3	3320	990.9	3321	1071
3322	947.6	3339	480.6	3343	497.4	3346	902.5
3347	511.8	3348	777.4	3350	799.2	3351	511.6
3353	517.9	3354	815.2	3360	831.3	3362	840.9
3364	887.5	3367	896.0	3369	888.6	3370	947.3
3371	883.8	3372	927.1	3375	927.7	3376	918.8
3393	466.3	3395	380.6	3400	443.1	3401	494.4
3402	799.0	3403	394.5	3405	501.2	3407	444.0
3408	850.1	3409	875.1	3416	847.7	3418	911.5
3421	917.7	3422	960.6	3424	961.5	3425	855.8
3426	966.9	3428	970.1	3430	876.7	3436	623.9
3448	573.3	3451	629.2	3453	575.3	3455	906.9
3459	977.6	3461	951.7	3464	855.1	3466	958.5
3468	843.3	3476	463.6	3478	413.7	3479	511.5
3480	631.8	3481	463.5	3482	414.3	3484	512.2
3485	631.7	3486	463.2	3488	631.2	3489	602.7
3490	343.7	3491	318.2	3493	671.8	3494	607.1
3495	346.4	3496	316.2	3498	682.8	3499	612.8
3500	313.1	3501	698.0	3512	512.5	3514	462.4
3515	382.8	3516	416.9	3518	629.4	3519	462.0
3520	416.6	3521	628.5	3525	687.8	3527	614.9
3528	351.9	3529	311.8	3531	703.8	3532	614.7
3533	311.7	3534	704.9				

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 20

ABAQUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSISDATE 27-FEB-84      TIME 17 37 43      PAGE 15  
STEP 2 INCREMENT 21INCREMENT NUMBER 21      ATTEMPT NUMBER 1  
TIME INCREMENT = 4.798E-02

MAXIMUM ESTIMATED CHANGE IN TEMPERATURE IN NEXT ITERATION WOULD BE 0.679      AND OCCURS AT NODE 1375

CONVERGENT SOLUTION

TIME COMPLETED DURING THIS STEP 2.50      TIME INCREMENT COMPLETED IS 4.798E-02,      FRACTION OF STEP IS 1.00  
TOTAL ACCUMULATED TIME IS 3.07  
TOTAL HEAT TIME IS 3.07

NODE POINT OUTPUT SET ALL

TOTAL TEMPERATURES

NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE	NODE	TEMPERATURE
1	350.9	2	842.6	3	346.9	4	352.0	5	865.7
6	346.8	7	353.0	8	888.6	9	348.3	10	333.5
11	717.1	12	329.7	13	334.1	14	740.8	15	330.4
16	332.8	17	768.8	18	330.6	19	305.0	20	384.2
21	304.9	22	304.8	23	390.0	24	305.0	25	302.2
26	398.2	27	305.1	28	535.0	29	251.3	30	171.7
31	548.2	32	243.2	33	170.3	34	561.9	35	223.9
36	167.2	37	647.5	38	595.7	39	532.7	40	682.8
41	590.1	42	531.4	43	747.6	44	576.8	45	528.1
46	395.7	47	416.2	48	408.5	49	406.7	50	415.7
51	408.3	52	427.7	53	414.9	54	407.5	58	354.4
59	932.8	60	690.6	61	355.7	62	942.6	63	771.9
67	333.9	68	821.8	69	596.4	70	333.9	71	836.7
72	687.0	76	302.6	77	415.4	78	366.7	79	301.5
80	419.5	81	391.3	83	339.6	84	336.5	86	689.7
87	707.9	89	772.1	90	777.0	92	328.4	93	329.6

ABAQUS VERSION 4-4-87										DATE 27-FEB-84			TIME 17:37:43			PAGE 16		
MACH 14 FLOW RESTRICTOR													STEP 2			INCREMENT 21		
TRANSIENT HEAT TRANSFER ANALYSIS																		
95	623 4	96	698 3	98	736 6	99	824 9	101	306 3									
102	306 0	104	375 2	105	396 2	107	406 0	108	434 9									
110	329 0	111	328 7	113	696 6	114	657 8	116	723 1									
117	603 1	119	327 8	120	325 2	122	755 8	123	775 7									
125	867 1	126	833 3	128	306 5	129	301 7	131	415 0									
132	426 6	134	455 2	135	455 7	139	551 9	140	206 0									
141	164 0	142	542 3	143	198 6	144	162 8	148	792 2									
149	562 8	150	525 1	151	805 1	152	557 0	153	523 9									
157	448 5	158	413 2	159	406 9	160	454 6	161	412 7									
162	406 6	163	714 5	164	955 2	165	711 6	166	715 6									
167	968 8	168	712 8	169	717 7	170	985 0	171	692 9									
172	624 7	173	910 3	174	625 5	175	625 1	176	927 8									
177	628 2	178	626 4	179	945 5	180	610 8	190	533 5									
191	183 1	192	108 7	193	532 9	194	175 3	195	107 6									
196	517 8	197	157 2	198	105 0	199	533 1	200	210 3									
201	132 5	202	539 1	203	202 3	204	131 4	205	536 7									
206	183 7	207	128 5	220	719 9	221	1018	222	836 5									
223	721 2	224	1026	225	873 5	229	629 4	230	981 6									
231	775 1	232	630 0	233	993 6	234	826 9	245	652 0									
246	599 8	248	799 2	249	763 9	251	835 1	252	785 1									
254	579 1	255	540 8	257	753 9	258	740 6	260	805 6									
261	780 8	272	541 7	273	500 6	275	705 4	276	635 8									
278	684 0	279	534 9	281	494 8	282	457 6	284	703 5									
285	644 4	287	701 7	288	565 2	301	484 3	302	139 8									
303	102 7	304	464 7	305	132 8	306	101 8	310	512 8									
311	165 7	312	125 8	313	498 4	314	158 1	315	124 9									
325	452 5	326	511 8	327	452 5	328	452 6	329	518 1									
330	454 5	331	452 5	332	524 2	333	451 1	334	770 9									
335	955 8	336	768 8	337	771 9	338	971 8	339	772 9									
340	774 0	341	988 0	342	759 6	343	776 0	344	977 0									
345	772 6	346	777 1	347	991 1	348	774 1	349	779 3									
350	1005	351	755 1	355	453 4	356	535 1	357	491 8									
358	453 5	359	537 5	360	503 8	364	776 4	365	1017									
366	881 5	367	777 6	368	1024	369	915 9	373	781 3									
374	1032	375	879 6	376	782 6	377	1038	378	909 7									
380	443 5	381	437 6	383	489 2	384	494 4	386	505 0									
387	503 7	389	733 1	390	715 2	392	869 3	393	892 3									
395	914 2	396	945 4	398	714 1	399	665 1	401	843 5									
402	814 6	404	873 0	405	832 8	407	413 8	408	362 3									
410	478 0	411	383 7	413	477 1	414	390 0	416	676 3									
417	708 3	419	901 5	420	911 8	422	959 0	423	958 6									
425	604 4	426	598 0	428	777 6	429	745 0	431	788 5									
432	727 9	433	323 3	435	323 3	439	325 1	441	325 7									
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485	307 0	487	314 2	489	315 0	491	315 0	493	310 3									

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MACH 14 FLOW PESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			2 INCREMENT			21			
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1170	75 01	1172	98 63	1173	74 32	1176	107 4	1179	74 44
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1191	77 87	1201	71 91	1202	348 6	1203	332 5	1204	726 8
1205	845 8	1206	745 9	1207	347 5	1208	329 5	1209	745 0
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1215	351 3	1216	332 0	1217	807 6	1218	333 2	1219	684 6
1220	802 3	1221	328 5	1222	617 7	1223	330 7	1224	324 4
1225	617 7	1226	723 1	1227	622 6	1228	332 6	1229	321 8
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1235	640 6	1236	335 8	1237	323 3	1238	703 7	1239	326 3
1240	591 8	1241	664 5	1242	322 3	1243	376 0	1244	304 1
1245	377 5	1246	385 1	1247	305 6	1248	382 8	1249	302 4
1250	377 5	1251	394 8	1252	306 6	1253	399 8	1254	368 5
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1275	321 9	1276	714 5	1277	661 9	1278	637 6	1279	324 2
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1285	303 0	1286	416 5	1287	400 4	1288	432 9	1291	179 8
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1401	328 8	1402	570 6	1403	327 1	1404	683 7	1407	700 1
1408	752 0	1409	626 9	1410	765 7	1411	684 0	1412	764 8
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1428	658 3	1429	701 0	1430	555 5	1431	788 2	1432	628 6
1433	698 9	1435	781 4	1436	654 3	1437	741 9	1438	305 8
1440	306 1	1441	348 6	1442	364 0	1443	366 5	1445	384 0
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1453	327 5	1454	566 0	1455	324 3	1456	541 4	1458	707 8

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						STEP		INCREMENT	
								21	
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1474	326 6	1475	585 1	1476	322 6	1477	594 3	1479	732 3
1482	770 0	1483	845 4	1484	691 2	1485	844 2	1486	722 1
1487	855 8	1489	860 3	1490	797 5	1491	794 5	1492	306 5
1494	304 2	1495	378 3	1496	380 7	1497	407 1	1499	422 7
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1509	618 6	1512	542 6	1513	670 0	1514	570 8	1516	671 1
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1609	473 7	1610	310 4	1611	304 9	1612	624 3	1613	519 1
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1733	495 9	1737	301 2	1738	306 3	1740	301 8	1741	307 4
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1762	403 9	1763	307 2	1764	303 1	1765	517 5	1766	433 4
1770	301 1	1771	304 3	1773	301 2	1774	305 2	1777	407 1
1778	306 6	1779	306 0	1780	476 2	1781	464 2	1782	409 9
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1791	304 6	1792	302 3	1793	441 0	1794	395 3	1795	378 6

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1796	304.6	1797	302.2	1798	447.3	1799	397.2	1803	301.1
1804	303.5	1806	301.3	1807	303.9	1810	528.7	1813	534.9
1814	533.0	1815	538.6	1819	527.9	1819	535.4	1820	568.5
1822	526.0	1823	505.0	1826	536.4	1827	531.6	1828	517.2
1831	540.0	1832	540.9	1833	558.0	1835	546.4	1843	364.1
1846	118.0	1847	182.4	1848	195.1	1849	107.1	1850	119.2
1851	347.0	1854	116.2	1855	167.2	1856	187.2	1857	106.0
1858	118.0	1859	302.9	1861	112.2	1862	169.0	1863	115.2
1864	392.9	1867	141.8	1868	209.8	1869	229.0	1870	130.8
1871	149.7	1872	376.4	1875	139.9	1876	194.1	1877	221.0
1878	129.5	1879	148.4	1880	332.9	1882	135.8	1883	202.0
1884	145.4	1898	314.8	1900	718.6	1902	546.4	1903	314.9
1904	314.0	1905	720.0	1906	684.3	1907	546.7	1908	314.1
1909	684.9	1911	309.8	1913	627.3	1915	475.6	1916	309.5
1917	306.2	1918	629.0	1919	515.0	1920	475.8	1921	306.1
1922	515.4	1924	307.4	1926	301.5	1927	307.8	1929	301.6
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1943	1001	1944	859.5	1945	810.2	1946	980.2	1948	953.5
1949	1010	1950	853.3	1955	965.6	1957	686.9	1959	903.7
1962	887.3	1963	991.7	1964	953.0	1965	818.6	1966	729.2
1967	925.2	1969	907.1	1970	962.6	1971	801.8	1988	740.8
1990	702.4	1992	815.8	1995	783.6	1996	829.6	1997	779.3
1998	789.3	1999	753.5	2000	851.9	2002	814.6	2003	822.0
2004	783.6	2009	670.4	2011	651.0	2013	760.2	2016	748.7
2017	794.7	2018	713.9	2019	778.6	2020	717.2	2021	811.7
2023	797.4	2024	790.5	2025	781.3	2042	650.0	2044	598.4
2046	738.1	2049	671.5	2050	712.1	2051	704.5	2052	601.9
2053	639.6	2054	742.0	2056	614.0	2057	692.6	2058	549.3
2063	614.5	2065	577.0	2067	726.1	2070	675.3	2071	723.3
2072	693.7	2073	626.6	2074	647.5	2075	749.8	2077	639.5
2078	714.3	2079	584.6	2095	500.0	2097	568.9	2100	468.4
2101	497.5	2102	497.7	2104	480.3	2108	525.4	2110	592.4
2113	500.4	2114	531.3	2115	528.7	2117	518.6	2129	147.3
2131	104.2	2133	256.1	2136	108.4	2137	134.3	2138	151.2
2139	102.8	2140	112.8	2141	236.3	2143	106.7	2144	143.9
2145	111.9	2150	173.1	2152	127.7	2154	286.1	2157	131.8
2158	159.6	2159	183.5	2160	126.0	2161	142.7	2162	266.6
2164	130.0	2165	176.2	2166	141.6	2169	587.6	2180	321.6
2181	320.1	2182	775.3	2183	767.9	2184	587.9	2185	321.8
2186	320.1	2187	776.6	2188	768.9	2189	588.6	2190	320.2
2191	770.8	2192	580.3	2193	320.0	2194	319.2	2195	765.0
2196	768.6	2197	580.6	2198	320.1	2199	319.2	2200	766.1
2201	769.5	2202	581.2	2203	319.3	2204	771.2	2205	585.1
2206	319.1	2207	318.1	2208	771.1	2209	764.7	2210	585.4
2211	319.2	2212	318.1	2213	772.2	2214	765.6	2215	586.0
2216	318.3	2217	767.2	2225	926.5	2228	927.9	2229	980.7

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2230	970 8	2231	775 3	2232	764 5	2233	941 8	2236	927 6								
2237	999 8	2238	983 9	2239	770 3	2240	765 0	2241	977 6								
2243	906 7	2244	996 5	2245	744 8	2246	920 5	2249	921 7								
2250	975 7	2251	981 6	2252	764 2	2253	764 7	2254	934 6								
2257	919 7	2258	992 3	2259	993 6	2260	756 9	2261	764 2								
2262	967 8	2264	897 2	2265	1005	2266	742 4	2267	937 9								
2270	939 1	2271	996 3	2272	991 6	2273	769 7	2274	761 1								
2275	951 7	2278	936 1	2279	1012	2280	1004	2281	761 5								
2282	760 7	2283	984 6	2285	912 4	2286	1016	2287	739 4								
2300	573 2	2301	320 9	2302	319 3	2305	584 5	2306	321 3								
2307	320 3	2310	585 8	2311	320 3	2313	563 6	2314	319 1								
2315	318 3	2318	576 2	2319	319 7	2320	319 3	2323	578 2								
2324	319 4	2326	567 1	2327	318 2	2328	317 3	2331	580 3								
2332	318 7	2333	318 3	2336	582 5	2337	318 4	2346	519 7								
2347	317 6	2348	315 0	2349	690 6	2350	643 8	2351	549 6								
2352	319 6	2353	317 2	2354	736 3	2355	700 6	2359	500 1								
2360	315 5	2361	313 8	2362	665 3	2363	630 6	2364	536 7								
2365	317 8	2366	316 3	2367	720 0	2368	694 9	2372	501 3								
2373	314 7	2374	313 1	2375	666 9	2376	631 5	2377	539 3								
2378	316 9	2379	315 4	2380	723 8	2381	692 9	2392	478 9								
2393	313 6	2394	311 4	2395	596 0	2396	552 4	2397	480 9								
2398	315 2	2399	312 8	2400	629 1	2401	577 2	2405	440 1								
2406	310 6	2407	309 5	2408	541 8	2409	520 7	2410	457 4								
2411	312 7	2412	311 2	2413	593 3	2414	558 8	2418	436 4								
2419	309 8	2420	308 9	2421	536 8	2422	521 5	2423	459 6								
2424	312 0	2425	310 7	2426	594 5	2427	563 7	2438	395 3								
2439	313 0	2440	310 4	2441	477 5	2442	453 3	2443	418 1								
2444	312 9	2445	310 6	2446	547 7	2447	480 7	2451	389 6								
2452	309 0	2453	308 4	2454	458 5	2455	459 8	2456	401 9								
2457	309 4	2458	308 6	2459	497 6	2460	474 2	2464	403 1								
2465	308 1	2466	307 8	2467	473 0	2468	483 6	2469	410 7								
2470	308 5	2471	308 1	2472	496 6	2473	491 3	2484	612 5								
2487	625 6	2488	568 9	2489	636 5	2492	626 9	2493	565 2								
2494	678 3	2496	540 4	2497	535 2	2500	530 5	2501	520 0								
2502	547 0	2505	511 7	2506	512 5	2507	571 2	2509	480 7								
2510	530 2	2513	522 3	2514	527 6	2515	539 3	2518	504 2								
2519	522 8	2520	561 4	2522	497 4	2530	336 3	2533	84 70								
2534	139 6	2535	141 2	2536	78 06	2537	78 11	2538	318 1								
2541	83 37	2542	126 5	2543	135 4	2544	77 65	2545	76 91								
2546	272 5	2548	80 20	2549	121 3	2550	74 38	2551	324 4								
2554	85 41	2555	137 1	2556	141 1	2557	77 98	2558	80 44								
2559	306 7	2562	84 00	2563	123 8	2564	134 6	2565	77 17								
2566	79 41	2567	262 3	2569	80 76	2570	119 3	2571	77 14								
2572	323 9	2575	91 19	2576	147 2	2577	158 9	2578	82 16								
2579	92 24	2580	306 0	2583	89 69	2584	133 8	2585	152 0								
2586	81 31	2587	91 11	2588	261 3	2590	86 21	2591	135 5								

ABAQUS VERSION 4-4-67										DATE 27-FEB-84			TIME 17.37.43			PAGE 22		
MACH 14 FLOW RESTRICTOR TRANSIENT HEAT TRANSFER ANALYSIS										STEP			2 INCREMENT 21					
2592	88.55	2606	321.6	2608	780.1	2610	589.4	2611	321.7									
2612	320.4	2613	781.5	2614	772.7	2615	589.6	2616	320.4									
2617	773.9	2619	319.9	2621	769.3	2623	581.9	2624	320.0									
2625	319.5	2626	770.5	2627	772.9	2628	582.1	2629	319.5									
2630	774.0	2632	319.0	2634	775.2	2636	586.6	2637	319.1									
2638	318.4	2639	776.3	2640	769.2	2641	586.8	2642	318.4									
2643	770.2	2655	1019.	2657	826.7	2659	995.1	2662	964.6									
2663	1038	2664	1023.	2665	906.8	2666	868.2	2667	1010									
2669	976.9	2670	1028	2671	896.3	2676	1010	2678	812.4									
2680	984.1	2683	953.4	2684	1027.	2685	1030	2686	890.6									
2687	869.6	2688	998.2	2690	964.6	2691	1034	2692	896.6									
2697	1029.	2699	821.3	2701	1001.	2704	970.6	2705	1047									
2706	1044.	2707	904.0	2708	874.3	2709	1016.	2711	982.2									
2712	1049.	2713	904.2	2730	792.5	2732	761.0	2734	858.5									
2737	830.6	2738	868.5	2739	825.7	2740	835.8	2741	782.2									
2742	888.0	2744	856.9	2745	849.6	2746	789.5	2751	770.6									
2753	720.1	2755	840.3	2758	794.5	2759	838.7	2760	820.7									
2761	777.5	2762	763.4	2763	863.9	2765	807.2	2766	839.4									
2767	760.8	2772	778.5	2774	724.3	2776	851.9	2779	802.3									
2780	849.1	2781	828.0	2782	782.3	2783	776.3	2784	875.8									
2786	813.6	2787	851.0	2788	779.8	2805	718.9	2807	695.5									
2809	797.5	2812	762.5	2813	796.8	2814	729.3	2815	745.8									
2816	673.8	2817	813.4	2819	760.9	2820	720.7	2821	627.0									
2826	658.8	2828	609.6	2830	735.2	2833	668.8	2834	702.9									
2835	692.3	2836	610.5	2837	618.9	2838	726.2	2840	625.5									
2841	660.6	2842	532.5	2847	658.6	2849	601.0	2851	736.2									
2854	658.6	2855	691.5	2856	704.6	2857	580.1	2858	627.7									
2859	719.6	2861	593.2	2862	668.4	2863	520.7	2879	598.4									
2881	683.1	2884	560.1	2885	493.2	2886	647.3	2888	467.0									
2892	464.8	2894	548.6	2897	420.6	2898	430.7	2899	488.3									
2901	404.9	2905	459.2	2907	534.2	2910	417.3	2911	454.3									
2912	463.7	2914	431.2	2926	110.4	2928	76.31	2930	225.1									
2933	77.01	2934	99.98	2935	107.2	2936	75.06	2937	72.40									
2938	205.2	2940	75.66	2941	101.2	2942	71.75	2947	106.9									
2949	75.66	2951	216.2	2954	77.59	2955	96.04	2956	104.5									
2957	74.43	2958	75.20	2959	196.8	2961	76.25	2962	98.51									
2963	74.49	2968	116.7	2970	79.76	2971	215.4	2972	82.80									
2976	105.3	2977	119.7	2978	78.57	2979	86.25	2980	196.3									
2982	81.36	2983	113.3	2984	85.41	2997	396.1	2998	306.9									
2999	318.7	3000	452.0	3001	678.9	3002	396.0	3003	307.0									
3004	318.7	3005	451.8	3006	680.3	3007	395.8	3008	318.7									
3009	683.5	3010	588.3	3011	322.4	3012	322.4	3013	770.1									
3014	787.9	3015	588.5	3016	322.7	3017	322.4	3018	771.3									
3019	789.3	3020	589.0	3021	322.5	3022	791.9	3023	500.1									
3033	501.5	3034	513.0	3035	820.0	3036	453.7	3037	676.4									
3038	506.5	3041	502.6	3042	522.1	3043	833.3	3044	455.3									

ABAQUS VERSION 4-4-67										DATE 27-FEB-84			TIME 17 37 43			PAGE 23		
MACH 14 FLOW RESTRICTOR										STEP			2 INCREMENT			21		
TRANSIENT HEAT TRANSFER ANALYSIS																		
3045	680 9	3046	522 0	3048	496 4	3049	847 7	3050	671 0									
3051	911 0	3054	913 2	3055	959 7	3056	986 1	3057	772 1									
3058	785 1	3059	927 5	3062	915 3	3063	982 0	3064	1002									
3065	771 9	3066	787 9	3067	966 3	3069	897 7	3070	1017									
3071	770 9	3084	394 2	3085	306 7	3086	318 5	3089	396 1									
3090	306 8	3091	319 0	3094	396 0	3095	318 9	3097	579 8									
3098	321 9	3099	321 8	3102	587 3	3103	322 2	3104	317 0									
3107	987 3	3108	322 7	3117	385 7	3118	306 2	3119	317 0									
3120	440 7	3121	640 3	3122	390 1	3123	306 5	3124	317 5									
3125	446 8	3126	652 0	3130	551 6	3131	319 9	3132	318 8									
3133	723 0	3134	702 9	3135	564 9	3136	321 0	3137	320 1									
3138	745 8	3139	736 6	3150	351 5	3151	304 9	3152	317 5									
3153	387 7	3154	647 5	3155	368 6	3156	305 6	3157	317 1									
3158	421 4	3159	600 7	3163	541 8	3164	319 0	3165	317 3									
3166	680 4	3167	661 7	3168	522 9	3169	318 7	3170	317 5									
3171	685 7	3172	650 5	3183	309 3	3184	318 1	3185	314 2									
3186	367 5	3187	319 0	3188	304 6	3189	319 1	3190	347 1									
3191	475 6	3195	378 5	3196	319 1	3197	316 8	3198	458 2									
3199	422 8	3200	426 4	3201	319 0	3202	786 2	3203	616 7									
3204	527 4	3215	512 5	3218	565 5	3219	869 3	3220	523 6									
3223	588 4	3224	816 3	3225	545 9	3227	913 7	3228	747 1									
3231	844 4	3232	778 6	3233	792 4	3236	452 9	3237	810 0									
3238	877 3	3240	850 0	3249	307 0	3251	485 7	3253	396 1									
3254	307 0	3255	318 9	3256	453 4	3257	685 7	3258	396 0									
3259	318 9	3260	687 2	3262	322 5	3264	775 1	3266	589 8									
3267	322 6	3268	322 7	3269	776 7	3270	794 4	3271	590 1									
3272	322 7	3273	795 8	3285	530 1	3287	475 0	3289	528 9									
3292	515 9	3293	537 7	3294	871 5	3295	502 6	3296	764 8									
3297	534 4	3299	520 3	3300	877 3	3301	791 7	3306	1004									
3308	829 5	3310	985 2	3313	955 5	3314	1024	3315	1047									
3316	910 6	3317	897 1	3318	999 9	3320	969 1	3321	1053									
3322	930 4	3339	471 1	3341	474 9	3343	486 9	3346	492 3									
3327	500 9	3348	758 7	3349	505 0	3350	781 9	3351	500 4									
3353	507 4	3354	795 9	3355	823 5	3360	814 0	3362	825 1									
3364	868 3	3367	878 2	3368	901 5	3369	873 3	3370	920 7									
3371	871 5	3372	907 0	3374	928 1	3375	912 6	3376	908 2									
3393	458 6	3395	376 3	3397	488 0	3400	438 5	3401	485 9									
3402	782 8	3403	389 9	3404	811 5	3405	492 4	3407	437 7									
3408	833 9	3409	859 1	3414	818 7	3415	833 4	3418	895 8									
3421	903 5	3422	945 9	3423	857 0	3424	949 1	3425	847 5									
3426	951 9	3428	957 4	3429	893 8	3430	872 6	3446	606 4									
3448	559 5	3451	612 7	3452	891 2	3453	562 1	3455	892 2									
3459	962 8	3461	939 8	3464	971 5	3465	851 1	3466	949 6									
3468	842 9	3476	450 5	3477	373 8	3478	404 6	3479	494 4									
3480	609 2	3481	450 5	3482	375 2	3483	405 4	3484	495 2									
3485	609 4	3486	450 4	3487	407 2	3488	609 2	3489	582 3									

ABAGUS VERSION 4-4-67

MACH 14 FLOW RESTRICTOR  
TRANSIENT HEAT TRANSFER ANALYSIS

	DATE 27-FEB-84	TIME 17.47.43	PAGE 24
3490	340.3	3491	316.8
3495	343.0	3496	315.0
3500	312.0	3501	674.6
3515	376.0	3516	408.1
3520	407.8	3521	606.9
3528	348.4	3529	310.7
3533	310.6	3534	684.4

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 21

THE ANALYSIS HAS BEEN COMPLETED

END OF RUN

APPENDIX I

ABAQUS THERMAL STRESS ANALYSIS INPUT FILES



\*HEADING, CORE=1000000  
 MACH 14 FLOW RESTRICTOR  
 THERMAL STRESS ANALYSIS ---- ELEMENT NUMBERING #2  
 PRESSURE FROM 22,000.0 ON THE FRONT FACE TO 20,000.0 ON THE BACK FACE  
 \*NODE, NSET=NALL

1.	0	35500.	0.		2	00000
2.	0	55000.	0.		2	00000
3.	0	74500.	0.		2	00000
4.	0	35196.	0.	04634.	2	00000
5.	0	56199.	0.	09109.	2	00000
6.	0	77202.	0.	13585.	2	00000
7.	0	34290.	0.	09188.	2	00000
8.	0	59594.	0.	17145.	2	00000
9.	0	84898.	0.	25102.	2	00000
10.	0	35500.	0.		2	39500
11.	0	55000.	0.		2	39500
12.	0	74500.	0.		2	39500
13.	0	35196.	0.	04634.	2	39500
14.	0	56199.	0.	09109.	2	39500
15.	0	77202.	0.	13585.	2	39500
16.	0	34290.	0.	09188.	2	39500
17.	0	59594.	0.	17145.	2	39500
18.	0	84898.	0.	25102.	2	39500
19.	0	35500.	0.		2	79000
20.	0	55000.	0.		2	79000
21.	0	74500.	0.		2	79000
22.	0	35196.	0.	04634.	2	79000
23.	0	56199.	0.	09109.	2	79000
24.	0	77202.	0.	13585.	2	79000
25.	0	34290.	0.	09188.	2	79000
26.	0	59594.	0.	17145.	2	79000
27.	0	84898.	0.	25102.	2	79000
28.	1	62500.	0.		2	00000
29.	2	12500.	0.		2	00000
30.	2	62500.	0.		2	00000
31.	1	61110.	0.	21211.	2	00000
32.	2	10682.	0.	27737.	2	00000
33.	2	60254.	0.	34263.	2	00000
34.	1	56963.	0.	42058.	2	00000
35.	2	05259.	0.	54999.	2	00000
36.	2	53556.	0.	67940.	2	00000
37.	1	62500.	0.		2	39500
38.	2	12500.	0.		2	39500
39.	2	62500.	0.		2	39500
40.	1	61110.	0.	21211.	2	39500
41.	2	10682.	0.	27737.	2	39500
42.	2	60254.	0.	34263.	2	39500
43.	1	56963.	0.	42058.	2	39500
44.	2	05259.	0.	54999.	2	39500
45.	2	53556.	0.	67940.	2	39500
46.	1	62500.	0.		2	79000
47.	2	12500.	0.		2	79000
48.	2	62500.	0.		2	79000
49.	1	61110.	0.	21211.	2	79000
50.	2	10682.	0.	27737.	2	79000
51.	2	60254.	0.	34263.	2	79000
52.	1	56963.	0.	42058.	2	79000
53.	2	05259.	0.	54999.	2	79000
54.	2	53556.	0.	67940.	2	79000
58.	0	32798.	0.	13585.	2	00000
59.	0	58820.	0.	25306.	2	00000
60.	0	84842.	0.	37027.	2	00000

61,	0.	30744,	0.	17750,	2.	00000
62,	0.	57765,	0.	33351,	2.	00000
63,	0.	84786,	0.	48951,	2.	00000
67,	0.	32798,	0.	13585,	2.	39500
68,	0.	58820,	0.	25306,	2.	39500
69,	0.	84842,	0.	37027,	2.	39500
70,	0.	30744,	0.	17750,	2.	39500
71,	0.	57765,	0.	33351,	2.	39500
72,	0.	84786,	0.	48951,	2.	39500
76,	0.	32798,	0.	13585,	2.	79000
77,	0.	58820,	0.	25306,	2.	79000
78,	0.	84842,	0.	37027,	2.	79000
79,	0.	30744,	0.	17750,	2.	79000
80,	0.	57765,	0.	33351,	2.	79000
81,	0.	84786,	0.	48951,	2.	79000
83,	0.	96415,	0.	32798,	2.	00000
84,	1.	10000,	0.	35500,	2.	00000
86,	0.	96901,	0.	44512,	2.	00000
87,	1.	09995,	0.	49501,	2.	00000
89,	0.	97388,	0.	56227,	2.	00000
90,	1.	09989,	0.	63502,	2.	00000
92,	0.	96415,	0.	32798,	2.	39500
93,	1.	10000,	0.	35500,	2.	39500
95,	0.	96901,	0.	44512,	2.	39500
96,	1.	09995,	0.	49501,	2.	39500
98,	0.	97388,	0.	56227,	2.	39500
99,	1.	09989,	0.	63502,	2.	39500
101,	0.	96415,	0.	32798,	2.	79000
102,	1.	10000,	0.	35500,	2.	79000
104,	0.	96901,	0.	44512,	2.	79000
105,	1.	09995,	0.	49501,	2.	79000
107,	0.	97388,	0.	56227,	2.	79000
108,	1.	09989,	0.	63502,	2.	79000
110,	1.	23585,	0.	32798,	2.	00000
111,	1.	35102,	0.	25102,	2.	00000
113,	1.	23067,	0.	51776,	2.	00000
114,	1.	35106,	0.	51554,	2.	00000
116,	1.	22550,	0.	70754,	2.	00000
117,	1.	35110,	0.	78006,	2.	00000
119,	1.	23585,	0.	32798,	2.	39500
120,	1.	35102,	0.	25102,	2.	39500
122,	1.	23067,	0.	51776,	2.	39500
123,	1.	35106,	0.	51554,	2.	39500
125,	1.	22550,	0.	70754,	2.	39500
126,	1.	35110,	0.	78006,	2.	39500
128,	1.	23585,	0.	32798,	2.	79000
129,	1.	35102,	0.	25102,	2.	79000
131,	1.	23067,	0.	51776,	2.	79000
132,	1.	35106,	0.	51554,	2.	79000
134,	1.	22550,	0.	70754,	2.	79000
135,	1.	35110,	0.	78006,	2.	79000
139,	1.	50130,	0.	62186,	2.	00000
140,	1.	96324,	0.	81320,	2.	00000
141,	2.	42518,	1.	00454,	2.	00000
142,	1.	40729,	0.	81250,	2.	00000
143,	1.	84030,	1.	06250,	2.	00000
144,	2.	27332,	1.	31250,	2.	00000
148,	1.	50130,	0.	62186,	2.	39500
149,	1.	96324,	0.	81320,	2.	39500
150,	2.	42518,	1.	00454,	2.	39500
151,	1.	40729,	0.	81250,	2.	39500
152,	1.	84030,	1.	06250,	2.	39500

153.	2.	27332.	1.	31250.	2.	39500
157.	1.	50130.	0.	62186.	2.	79000
158.	1.	96324.	0.	81320.	2.	79000
159.	2.	42518.	1.	00454.	2.	79000
160.	1.	40729.	0.	81250.	2.	79000
161.	1.	84030.	1.	06250.	2.	79000
162.	2.	27332.	1.	31250.	2.	79000
163.	0.	35500.	0.		1.	81100
164.	0.	55000.	0.		1.	81100
165.	0.	74500.	0.		1.	81100
166.	0.	35196.	0.	04634.	1.	81100
167.	0.	56199.	0.	09109.	1.	81100
168.	0.	77202.	0.	13585.	1.	81100
169.	0.	34290.	0.	09188.	1.	81100
170.	0.	59594.	0.	17145.	1.	81100
171.	0.	84898.	0.	25102.	1.	81100
172.	0.	35500.	0.		1.	90550
173.	0.	55000.	0.		1.	90550
174.	0.	74500.	0.		1.	90550
175.	0.	35196.	0.	04634.	1.	90550
176.	0.	56199.	0.	09109.	1.	90550
177.	0.	77202.	0.	13585.	1.	90550
178.	0.	34290.	0.	09188.	1.	90550
179.	0.	59594.	0.	17145.	1.	90550
180.	0.	84898.	0.	25102.	1.	90550
190.	1.	62500.	0.		1.	81100
191.	2.	12500.	0.		1.	81100
192.	2.	62500.	0.		1.	81100
193.	1.	61110.	0.	21211.	1.	81100
194.	2.	10682.	0.	27737.	1.	81100
195.	2.	60254.	0.	34263.	1.	81100
196.	1.	56963.	0.	42058.	1.	81100
197.	2.	05259.	0.	54999.	1.	81100
198.	2.	53556.	0.	67940.	1.	81100
199.	1.	62500.	0.		1.	90550
200.	2.	12500.	0.		1.	90550
201.	2.	62500.	0.		1.	90550
202.	1.	61110.	0.	21211.	1.	90550
203.	2.	10682.	0.	27737.	1.	90550
204.	2.	60254.	0.	34263.	1.	90550
205.	1.	56963.	0.	42058.	1.	90550
206.	2.	05259.	0.	54999.	1.	90550
207.	2.	53556.	0.	67940.	1.	90550
220.	0.	32798.	0.	13585.	1.	81100
221.	0.	58820.	0.	25306.	1.	81100
222.	0.	84842.	0.	37027.	1.	81100
223.	0.	30744.	0.	17750.	1.	81100
224.	0.	57765.	0.	33351.	1.	81100
225.	0.	84786.	0.	48951.	1.	81100
229.	0.	32798.	0.	13585.	1.	90550
230.	0.	58820.	0.	25306.	1.	90550
231.	0.	84842.	0.	37027.	1.	90550
232.	0.	30744.	0.	17750.	1.	90550
233.	0.	57765.	0.	33351.	1.	90550
234.	0.	84786.	0.	48951.	1.	90550
245.	0.	96415.	0.	32798.	1.	81100
246.	1.	10000.	0.	35500.	1.	81100
248.	0.	96901.	0.	44512.	1.	81100
249.	1.	09995.	0.	49501.	1.	81100
251.	0.	97388.	0.	56227.	1.	81100
252.	1.	09989.	0.	63502.	1.	81100
254.	0.	96415.	0.	32798.	1.	90550

255,	1.	10000,	0.	35500,	1.	90550
257,	0.	96901,	0.	44512,	1.	90550
258,	1.	09995,	0.	49501,	1.	90550
260,	0.	97388,	0.	56227,	1.	90550
261,	1.	09989,	0.	63502,	1.	90550
272,	1.	23585,	0.	32798,	1.	81100
273,	1.	35102,	0.	25102,	1.	81100
275,	1.	23067,	0.	51776,	1.	81100
276,	1.	35106,	0.	51554,	1.	81100
278,	1.	22550,	0.	70754,	1.	81100
279,	1.	35110,	0.	78006,	1.	81100
281,	1.	23585,	0.	32798,	1.	90550
282,	1.	35102,	0.	25102,	1.	90550
284,	1.	23067,	0.	51776,	1.	90550
285,	1.	35106,	0.	51554,	1.	90550
287,	1.	22550,	0.	70754,	1.	90550
288,	1.	35110,	0.	78006,	1.	90550
301,	1.	50130,	0.	62186,	1.	81100
302,	1.	96324,	0.	81320,	1.	81100
303,	2.	42518,	1.	00454,	1.	81100
304,	1.	40729,	0.	81250,	1.	81100
305,	1.	84030,	1.	06250,	1.	81100
306,	2.	27332,	1.	31250,	1.	81100
310,	1.	50130,	0.	62186,	1.	90550
311,	1.	96324,	0.	81320,	1.	90550
312,	2.	42518,	1.	00454,	1.	90550
313,	1.	40729,	0.	81250,	1.	90550
314,	1.	84030,	1.	06250,	1.	90550
315,	2.	27332,	1.	31250,	1.	90550
325,	0.	40000,	0.		0.	36000
326,	0.	55000,	0.		0.	36000
327,	0.	70000,	0.		0.	36000
328,	0.	39658,	0.	05221,	0.	36000
329,	0.	56351,	0.	10264,	0.	36000
330,	0.	73045,	0.	15307,	0.	36000
331,	0.	38637,	0.	10355,	0.	36000
332,	0.	60176,	0.	19319,	0.	36000
333,	0.	81716,	0.	28284,	0.	36000
334,	0.	38946,	0.		0.	70000
335,	0.	55000,	0.		0.	70000
336,	0.	71054,	0.		0.	70000
337,	0.	38612,	0.	05083,	0.	70000
338,	0.	56317,	0.	09993,	0.	70000
339,	0.	74021,	0.	14903,	0.	70000
340,	0.	37619,	0.	10080,	0.	70000
341,	0.	60040,	0.	18809,	0.	70000
342,	0.	82461,	0.	27539,	0.	70000
343,	0.	37891,	0.		1.	04000
344,	0.	55000,	0.		1.	04000
345,	0.	72109,	0.		1.	04000
346,	0.	37567,	0.	04946,	1.	04000
347,	0.	56282,	0.	09722,	1.	04000
348,	0.	74997,	0.	14498,	1.	04000
349,	0.	36600,	0.	09807,	1.	04000
350,	0.	59903,	0.	18300,	1.	04000
351,	0.	83207,	0.	26793,	1.	04000
355,	0.	36955,	0.	15307,	0.	36000
356,	0.	59358,	0.	26532,	0.	36000
357,	0.	81760,	0.	37757,	0.	36000
358,	0.	34641,	0.	20000,	0.	36000
359,	0.	58223,	0.	33615,	0.	36000
360,	0.	81805,	0.	47230,	0.	36000

364,	0.	35981,	0.	14904,	0.	70000
365,	0.	59232,	0.	26245,	0.	70000
366,	0.	82482,	0.	37586,	0.	70000
367,	0.	33728,	0.	19473,	0.	70000
368,	0.	58116,	0.	33553,	0.	70000
369,	0.	82503,	0.	47633,	0.	70000
373,	0.	35007,	0.	14500,	1.	04000
374,	0.	59106,	0.	25958,	1.	04000
375,	0.	83204,	0.	37415,	1.	04000
376,	0.	32815,	0.	18946,	1.	04000
377,	0.	58008,	0.	33491,	1.	04000
378,	0.	83202,	0.	48037,	1.	04000
380,	0.	94693,	0.	36955,	0.	36000
381,	1.	10000,	0.	40000,	0.	36000
383,	0.	95323,	0.	46177,	0.	36000
384,	1.	10052,	0.	51784,	0.	36000
386,	0.	95954,	0.	55399,	0.	36000
387,	1.	10103,	0.	63568,	0.	36000
389,	0.	95097,	0.	35979,	0.	70000
390,	1.	10000,	0.	38946,	0.	70000
392,	0.	95693,	0.	45786,	0.	70000
393,	1.	10038,	0.	51249,	0.	70000
395,	0.	96290,	0.	55593,	0.	70000
396,	1.	10076,	0.	63553,	0.	70000
398,	0.	95501,	0.	35003,	1.	04000
399,	1.	10000,	0.	37891,	1.	04000
401,	0.	96064,	0.	45395,	1.	04000
402,	1.	10025,	0.	50714,	1.	04000
404,	0.	96626,	0.	55787,	1.	04000
405,	1.	10050,	0.	63537,	1.	04000
407,	1.	21670,	0.	36262,	0.	36000
408,	1.	33341,	0.	32523,	0.	36000
410,	1.	18727,	0.	51418,	0.	36000
411,	1.	27402,	0.	51051,	0.	36000
413,	1.	14482,	0.	66097,	0.	36000
414,	1.	18862,	0.	68625,	0.	36000
416,	1.	22097,	0.	35453,	0.	70000
417,	1.	33757,	0.	30771,	0.	70000
419,	1.	19708,	0.	51518,	0.	70000
420,	1.	29219,	0.	51106,	0.	70000
422,	1.	16373,	0.	67188,	0.	70000
423,	1.	22669,	0.	70823,	0.	70000
425,	1.	22523,	0.	34644,	1.	04000
426,	1.	34173,	0.	29020,	1.	04000
428,	1.	20689,	0.	51619,	1.	04000
429,	1.	31035,	0.	51160,	1.	04000
431,	1.	18263,	0.	68279,	1.	04000
432,	1.	26477,	0.	73021,	1.	04000
433,	1.	45500,	0.		2.	00000
435,	1.	42798,	0.	13585,	2.	00000
439,	1.	45500,	0.		2.	39500
441,	1.	42798,	0.	13585,	2.	39500
445,	1.	45500,	0.		2.	79000
447,	1.	42798,	0.	13585,	2.	79000
469,	0.	23000,	0.		1.	81100
471,	0.	22803,	0.	03002,	1.	81100
473,	0.	22216,	0.	05953,	1.	81100
475,	0.	23000,	0.		1.	90550
477,	0.	22803,	0.	03002,	1.	90550
479,	0.	22216,	0.	05953,	1.	90550
481,	0.	23000,	0.		2.	00000
483,	0.	22803,	0.	03002,	2.	00000

485.	0.	22216.	0.	05953.	2.	00000
487.	0.	93737.	0.	16263.	1.	81100
489.	0.	88751.	0.	08802.	1.	81100
491.	0.	87000.	0.		1.	81100
493.	0.	93737.	0.	16263.	1.	90550
495.	0.	88751.	0.	08802.	1.	90550
497.	0.	87000.	0.		1.	90550
499.	0.	93737.	0.	16263.	2.	00000
501.	0.	88751.	0.	08802.	2.	00000
503.	0.	87000.	0.		2.	00000
505.	1.	10000.	0.	23000.	1.	81100
507.	1.	01198.	0.	21249.	1.	81100
511.	1.	10000.	0.	23000.	1.	90550
513.	1.	01198.	0.	21249.	1.	90550
517.	1.	10000.	0.	23000.	2.	00000
519.	1.	01198.	0.	21249.	2.	00000
523.	1.	26263.	0.	16263.	1.	81100
525.	1.	18802.	0.	21249.	1.	81100
529.	1.	26263.	0.	16263.	1.	90550
531.	1.	18802.	0.	21249.	1.	90550
535.	1.	26263.	0.	16263.	2.	00000
537.	1.	18802.	0.	21249.	2.	00000
541.	1.	33000.	0.		1.	81100
542.	1.	45500.	0.		1.	81100
543.	1.	31249.	0.	08802.	1.	81100
544.	1.	42798.	0.	13585.	1.	81100
547.	1.	33000.	0.		1.	90550
548.	1.	45500.	0.		1.	90550
549.	1.	31249.	0.	08802.	1.	90550
550.	1.	42798.	0.	13585.	1.	90550
553.	1.	33000.	0.		2.	00000
555.	1.	31249.	0.	08802.	2.	00000
579.	0.	21249.	0.	08802.	1.	81100
581.	0.	19919.	0.	11500.	1.	81100
585.	0.	21249.	0.	08802.	1.	90550
587.	0.	19919.	0.	11500.	1.	90550
591.	0.	21249.	0.	08802.	2.	00000
593.	0.	19919.	0.	11500.	2.	00000
613.	0.	27250.	0.		0.	36000
615.	0.	27017.	0.	03557.	0.	36000
617.	0.	26321.	0.	07053.	0.	36000
619.	0.	26254.	0.		0.	70000
621.	0.	26030.	0.	03427.	0.	70000
623.	0.	25360.	0.	06795.	0.	70000
625.	0.	25258.	0.		1.	04000
627.	0.	25042.	0.	03297.	1.	04000
629.	0.	24398.	0.	06537.	1.	04000
631.	0.	90731.	0.	19269.	0.	36000
633.	0.	84824.	0.	10428.	0.	36000
635.	0.	82750.	0.		0.	36000
637.	0.	91436.	0.	18564.	0.	70000
639.	0.	85746.	0.	10046.	0.	70000
641.	0.	83746.	0.		0.	70000
643.	0.	92140.	0.	17860.	1.	04000
645.	0.	86667.	0.	09665.	1.	04000
647.	0.	84742.	0.		1.	04000
649.	1.	10000.	0.	27250.	0.	36000
651.	0.	99572.	0.	25176.	0.	36000
655.	1.	10000.	0.	26254.	0.	70000
657.	0.	99948.	0.	24255.	0.	70000
661.	1.	10000.	0.	25258.	1.	04000
663.	1.	00325.	0.	23334.	1.	04000

667.	1	29269.	0	19269.	0	36000
669.	1	20428.	0	25176.	0	36000
673.	1	28564.	0	18564.	0	70000
675.	1	20047.	0	24254.	0	70000
679.	1	27860.	0	17860.	1	04000
681.	1	19665.	0	23333.	1	04000
685.	1	37250.	0		0	36000
687.	1	35176.	0	10428.	0	36000
688.	1	36265.	0	16413.	0	36000
691.	1	36254.	0		0	70000
692.	1	39183.	0		0	70000
693.	1	34254.	0	10047.	0	70000
694.	1	37814.	0	15674.	0	70000
697.	1	35258.	0		1	04000
698.	1	41116.	0		1	04000
699.	1	33333.	0	09665.	1	04000
700.	1	39363.	0	14936.	1	04000
704.	1	62500.	0		0	36000
706.	1	61110.	0	21211.	0	36000
708.	1	56963.	0	42058.	0	36000
710.	1	62500.	0		0	70000
712.	1	61110.	0	21210.	0	70000
714.	1	56963.	0	42058.	0	70000
716.	1	62500.	0		1	04000
718.	1	61110.	0	21210.	1	04000
720.	1	56963.	0	42058.	1	04000
723.	0	25176.	0	10428.	0	36000
725.	0	23599.	0	13625.	0	36000
729.	0	24256.	0	10047.	0	70000
731.	0	22737.	0	13127.	0	70000
735.	0	23336.	0	09666.	1	04000
737.	0	21874.	0	12629.	1	04000
742.	1	50130.	0	62186.	0	36000
744.	1	40729.	0	81250.	0	36000
748.	1	50130.	0	62186.	0	70000
750.	1	40729.	0	81250.	0	70000
754.	1	50130.	0	62186.	1	04000
756.	1	40729.	0	81250.	1	04000
757.	1	37250.	0		0	
758.	1	62500.	0		0	
759.	1	36265.	0	16413.	0	
760.	1	61110.	0	21211.	0	
761.	1	33341.	0	32523.	0	
762.	1	56963.	0	42058.	0	
763.	1	37250.	0		0	18000
764.	1	62500.	0		0	18000
765.	1	36265.	0	16413.	0	18000
766.	1	61110.	0	21211.	0	18000
767.	1	33341.	0	32523.	0	18000
768.	1	56963.	0	42058.	0	18000
777.	1	27402.	0	51051.	0	
778.	1	50130.	0	62186.	0	
779.	1	18862.	0	68625.	0	
780.	1	40729.	0	81250.	0	
783.	1	27402.	0	51051.	0	18000
784.	1	50130.	0	62186.	0	18000
785.	1	18862.	0	68625.	0	18000
786.	1	40729.	0	81250.	0	18000
799.	0	24506.	0		1	29700
800.	0	37094.	0		1	29700
801.	0	24296.	0	03199.	1	29700
802.	0	36777.	0	04842.	1	29700

803,	0.	23671,	0.	06342,	1.	29700
804,	0.	35830,	0.	09601,	1.	29700
805,	0.	23753,	0.		1.	55400
806,	0.	36297,	0.		1.	55400
807,	0.	23550,	0.	03100,	1.	55400
808,	0.	35986,	0.	04738,	1.	55400
809,	0.	22943,	0.	06148,	1.	55400
810,	0.	35060,	0.	09394,	1.	55400
823,	0.	92672,	0.	17328,	1.	29700
824,	0.	83771,	0.	26229,	1.	29700
825,	0.	87361,	0.	09377,	1.	29700
826,	0.	75732,	0.	14194,	1.	29700
827,	0.	85494,	0.		1.	29700
828,	0.	72906,	0.		1.	29700
829,	0.	93204,	0.	16796,	1.	55400
830,	0.	84334,	0.	25666,	1.	55400
831,	0.	88056,	0.	09089,	1.	55400
832,	0.	76467,	0.	13890,	1.	55400
833,	0.	86247,	0.		1.	55400
834,	0.	73703,	0.		1.	55400
847,	1.	10000,	0.	24506,	1.	29700
848,	1.	10000,	0.	37094,	1.	29700
849,	1.	00616,	0.	22639,	1.	29700
850,	0.	95806,	0.	34268,	1.	29700
853,	1.	10000,	0.	23753,	1.	55400
854,	1.	10000,	0.	36297,	1.	55400
855,	1.	00907,	0.	21944,	1.	55400
856,	0.	96110,	0.	33533,	1.	55400
871,	1.	27328,	0.	17328,	1.	29700
872,	1.	34483,	0.	27714,	1.	29700
873,	1.	19377,	0.	22638,	1.	29700
874,	1.	22877,	0.	34029,	1.	29700
877,	1.	26796,	0.	16796,	1.	55400
878,	1.	34792,	0.	26408,	1.	55400
879,	1.	19089,	0.	21944,	1.	55400
880,	1.	23231,	0.	33413,	1.	55400
895,	1.	34506,	0.		1.	29700
896,	1.	42578,	0.		1.	29700
897,	1.	32638,	0.	09377,	1.	29700
898,	1.	40508,	0.	14486,	1.	29700
901,	1.	33753,	0.		1.	55400
902,	1.	44039,	0.		1.	55400
903,	1.	31944,	0.	09089,	1.	55400
904,	1.	41653,	0.	14035,	1.	55400
920,	1.	62500,	0.		1.	29700
922,	1.	61110,	0.	21210,	1.	29700
924,	1.	56963,	0.	42058,	1.	29700
926,	1.	62500,	0.		1.	55400
928,	1.	61110,	0.	21210,	1.	55400
930,	1.	56963,	0.	42058,	1.	55400
945,	0.	22640,	0.	09378,	1.	29700
946,	0.	34270,	0.	14195,	1.	29700
947,	0.	21222,	0.	12253,	1.	29700
948,	0.	32124,	0.	18547,	1.	29700
951,	0.	21945,	0.	09090,	1.	55400
952,	0.	33534,	0.	13890,	1.	55400
953,	0.	20570,	0.	11876,	1.	55400
954,	0.	31434,	0.	18149,	1.	55400
969,	1.	32392,	0.	51290,	1.	29700
970,	1.	50130,	0.	62186,	1.	29700
971,	1.	29354,	0.	74683,	1.	29700
972,	1.	40729,	0.	81250,	1.	29700



975,	1	33749,	0	51422,	1	55400
976,	1	50130,	0	62186,	1	55400
977,	1	32232,	0	76344,	1	55400
978,	1	40729,	0	81250,	1	55400
995,	0	55000,	0		1	29700
998,	0	56254,	0	09518,	1	29700
1001,	0	59800,	0	17915,	1	29700
1004,	0	55000,	0		1	55400
1007,	0	56227,	0	09314,	1	55400
1010,	0	59697,	0	17530,	1	55400
1022,	2	12500,	0		1	04000
1023,	2	62500,	0		1	04000
1025,	2	10682,	0	27737,	1	04000
1026,	2	60254,	0	34263,	1	04000
1028,	2	05259,	0	54999,	1	04000
1029,	2	53556,	0	67940,	1	04000
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1151,	1	22275,	0	51724,	1	55400
1154,	1	21121,	0	69929,	1	55400
1169,	1	96324,	0	81320,	1	04000
1170,	2	42518,	1	00454,	1	04000
1172,	1	84030,	1	06250,	1	04000
1173,	2	27332,	1	31250,	1	04000
1178,	1	96324,	0	81320,	1	29700
1179,	2	42518,	1	00454,	1	29700
1181,	1	84030,	1	06250,	1	29700
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1271.	1.	62152.	0.	10634.	2.	39500
1272.	1.	62500.	0.		2.	59250
1273.	1.	51954.	0.	17398.	2.	39500
1274.	1.	39520.	0.	19718.	2.	39500
1275.	1.	42798.	0.	13585.	2.	59250
1276.	1.	59379.	0.	31697.	2.	39500
1277.	1.	61110.	0.	21211.	2.	59250
1278.	1.	46033.	0.	33580.	2.	39500
1279.	1.	35102.	0.	25102.	2.	59250
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1283.	1.	62152.	0.	10634.	2.	79000
1284.	1.	51954.	0.	17398.	2.	79000
1285.	1.	39520.	0.	19718.	2.	79000
1286.	1.	59379.	0.	31697.	2.	79000
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1352.	0.	32798.	0.	13585.	2.	19750
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1354.	0.	58329.	0.	29329.	2.	00000
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1357.	0.	84842.	0.	37027.	2.	19750
1358.	0.	44254.	0.	25550.	2.	00000
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1587,	1.	90589,	0.	93980,	2.	79000
1588,	2.	35433,	1.	16093,	2.	79000
1589,	1.	62380,	0.	93750,	2.	79000
1590,	2.	05681,	1.	18750,	2.	79000
1591,	0.	29250,	0.		1.	81100
1592,	0.	22951,	0.	01505,	1.	81100
1593,	0.	23000,	0.		1.	85825
1594,	0.	35424,	0.	02323,	1.	81100
1595,	0.	35500,	0.		1.	85825
1596,	0.	29000,	0.	03818,	1.	81100
1597,	0.	22558,	0.	04486,	1.	81100
1598,	0.	22803,	0.	03002,	1.	85825
1599,	0.	34818,	0.	06924,	1.	81100
1600,	0.	35196,	0.	04634,	1.	85825
1601,	0.	28253,	0.	07570,	1.	81100

1602.	0.	22216.	0.	05953.	1	85825
1603.	0.	34290.	0.	09188.	1	85825
1604.	0.	29250.	0.		1.	90550
1605.	0.	22951.	0.	01505.	1.	90550
1606.	0.	23000.	0.		1	95275
1607.	0.	35424.	0.	02323.	1.	90550
1608.	0.	35500.	0.		1.	95275
1609.	0.	29000.	0.	03818.	1.	90550
1610.	0.	22558.	0.	04486.	1.	90550
1611.	0.	22803.	0.	03002.	1.	95275
1612.	0.	34818.	0.	06924.	1.	90550
1613.	0.	35196.	0.	04634.	1	95275
1614.	0.	28253.	0.	07570.	1	90550
1615.	0.	22216.	0.	05953.	1.	95275
1616.	0.	34290.	0.	09188.	1.	95275
1617.	0.	29250.	0.		2.	00000
1618.	0.	22951.	0.	01505.	2.	00000
1620.	0.	29000.	0.	03818.	2.	00000
1621.	0.	22558.	0.	04486.	2.	00000
1623.	0.	28253.	0.	07570.	2.	00000
1624.	0.	45250.	0.		1	81100
1627.	0.	64750.	0.		1	81100
1628.	0.	55299.	0.	04587.	1.	81100
1629.	0.	55000.	0.		1	85825
1630.	0.	75183.	0.	06931.	1.	81100
1631.	0.	74500.	0.		1.	85825
1632.	0.	45698.	0.	06872.	1.	81100
1635.	0.	66701.	0.	11347.	1.	81100
1636.	0.	57608.	0.	13231.	1	81100
1637.	0.	56199.	0.	09109.	1.	85825
1638.	0.	80480.	0.	19718.	1.	81100
1639.	0.	77202.	0.	13585.	1	85825
1640.	0.	46942.	0.	13167.	1	81100
1642.	0.	72246.	0.	21124.	1	81100
1643.	0.	59594.	0.	17145.	1.	85825
1644.	0.	84898.	0.	25102.	1.	85825
1645.	0.	45250.	0.		1	90550
1648.	0.	64750.	0.		1.	90550
1649.	0.	55299.	0.	04587.	1.	90550
1650.	0.	55000.	0.		1.	95275
1651.	0.	75183.	0.	06931.	1	90550
1652.	0.	74500.	0.		1.	95275
1653.	0.	45698.	0.	06872.	1	90550
1656.	0.	66701.	0.	11347.	1.	90550
1657.	0.	57608.	0.	13231.	1.	90550
1658.	0.	56199.	0.	09109.	1.	95275
1659.	0.	80480.	0.	19718.	1.	90550
1660.	0.	77202.	0.	13585.	1	95275
1661.	0.	46942.	0.	13167.	1.	90550
1663.	0.	72246.	0.	21124.	1	90550
1664.	0.	59594.	0.	17145.	1.	95275
1665.	0.	84898.	0.	25102.	1.	95275
1678.	0.	89317.	0.	20683.	1	81100
1679.	0.	90874.	0.	12775.	1	81100
1680.	0.	93737.	0.	16263.	1.	85825
1683.	0.	82977.	0.	11193.	1	81100
1684.	0.	87443.	0.	04491.	1	81100
1685.	0.	88751.	0.	08802.	1	85825
1688.	0.	80750.	0.		1	81100
1689.	0.	87000.	0.		1	85825
1691.	0.	89317.	0.	20683.	1	90550
1692.	0.	90874.	0.	12775.	1	90550

1693.	0. 93737,	0. 16263,	1. 95275
1696.	0. 82977,	0. 11193,	1. 90550
1697.	0. 87443,	0. 04491,	1. 90550
1698.	0. 88751,	0. 08802,	1. 95275
1701.	0. 80750,	0.	1. 90550
1702.	0. 87000,	0.	1. 95275
1704.	0. 89317,	0. 20683,	2. 00000
1705.	0. 90874,	0. 12775,	2. 00000
1707.	0. 82977,	0. 11193,	2. 00000
1708.	0. 87443,	0. 04491,	2. 00000
1710.	0. 80750,	0.	2. 00000
1711.	1. 10000,	0. 29250,	1. 81100
1712.	1. 05509,	0. 22557,	1. 81100
1713.	1. 10000,	0. 23000,	1. 85825
1714.	1. 03069,	0. 34817,	1. 81100
1715.	1. 10000,	0. 35500,	1. 85825
1716.	0. 98806,	0. 27023,	1. 81100
1717.	0. 97225,	0. 19126,	1. 81100
1718.	1. 01198,	0. 21249,	1. 85825
1719.	0. 90282,	0. 29521,	1. 81100
1720.	0. 96415,	0. 32798,	1. 85825
1724.	1. 10000,	0. 29250,	1. 90550
1725.	1. 05509,	0. 22557,	1. 90550
1726.	1. 10000,	0. 23000,	1. 95275
1727.	1. 03069,	0. 34817,	1. 90550
1728.	1. 10000,	0. 35500,	1. 95275
1729.	0. 98806,	0. 27023,	1. 90550
1730.	0. 97225,	0. 19126,	1. 90550
1731.	1. 01198,	0. 21249,	1. 95275
1732.	0. 90282,	0. 29521,	1. 90550
1733.	0. 96415,	0. 32798,	1. 95275
1737.	1. 10000,	0. 29250,	2. 00000
1738.	1. 05509,	0. 22557,	2. 00000
1740.	0. 98806,	0. 27023,	2. 00000
1741.	0. 97225,	0. 19126,	2. 00000
1744.	1. 30683,	0. 20683,	1. 81100
1745.	1. 22775,	0. 19126,	1. 81100
1746.	1. 26263,	0. 16263,	1. 85825
1747.	1. 29718,	0. 29521,	1. 81100
1748.	1. 35102,	0. 25102,	1. 85825
1749.	1. 21193,	0. 27023,	1. 81100
1750.	1. 14491,	0. 22557,	1. 81100
1751.	1. 18802,	0. 21249,	1. 85825
1752.	1. 16931,	0. 34817,	1. 81100
1753.	1. 23585,	0. 32798,	1. 85825
1757.	1. 30683,	0. 20683,	1. 90550
1758.	1. 22775,	0. 19126,	1. 90550
1759.	1. 26263,	0. 16263,	1. 95275
1760.	1. 29718,	0. 29521,	1. 90550
1761.	1. 35102,	0. 25102,	1. 95275
1762.	1. 21193,	0. 27023,	1. 90550
1763.	1. 14491,	0. 22557,	1. 90550
1764.	1. 18802,	0. 21249,	1. 95275
1765.	1. 16931,	0. 34817,	1. 90550
1766.	1. 23585,	0. 32798,	1. 95275
1770.	1. 30683,	0. 20683,	2. 00000
1771.	1. 22775,	0. 19126,	2. 00000
1773.	1. 21193,	0. 27023,	2. 00000
1774.	1. 14491,	0. 22557,	2. 00000
1777.	1. 39250,	0.	1. 81100
1778.	1. 32557,	0. 04491,	1. 81100
1779.	1. 33000,	0.	1. 85825



1780,	1.	44817,	0.	06931,	1.	81100
1781,	1.	45500,	0.		1.	85825
1782,	1.	37023,	0.	11193,	1.	81100
1783,	1.	29126,	0.	12775,	1.	81100
1784,	1.	31249,	0.	08802,	1.	85825
1785,	1.	39520,	0.	19718,	1.	81100
1786,	1.	42798,	0.	13585,	1.	85825
1790,	1.	39250,	0.		1.	90550
1791,	1.	32557,	0.	04491,	1.	90550
1792,	1.	33000,	0.		1.	95275
1793,	1.	44817,	0.	06931,	1.	90550
1794,	1.	45500,	0.		1.	95275
1795,	1.	37023,	0.	11193,	1.	90550
1796,	1.	29126,	0.	12775,	1.	90550
1797,	1.	31249,	0.	08802,	1.	95275
1798,	1.	39520,	0.	19718,	1.	90550
1799,	1.	42798,	0.	13585,	1.	95275
1803,	1.	39250,	0.		2.	00000
1804,	1.	32557,	0.	04491,	2.	00000
1806,	1.	37023,	0.	11193,	2.	00000
1807,	1.	29126,	0.	12775,	2.	00000
1810,	1.	54000,	0.		1.	81100
1813,	1.	62152,	0.	10634,	1.	81100
1814,	1.	62500,	0.		1.	85825
1815,	1.	51954,	0.	17398,	1.	81100
1818,	1.	59379,	0.	31697,	1.	81100
1819,	1.	61110,	0.	21211,	1.	85825
1820,	1.	46033,	0.	33580,	1.	81100
1822,	1.	56963,	0.	42058,	1.	85825
1823,	1.	54000,	0.		1.	90550
1826,	1.	62152,	0.	10634,	1.	90550
1827,	1.	62500,	0.		1.	95275
1828,	1.	51954,	0.	17398,	1.	90550
1831,	1.	59379,	0.	31697,	1.	90550
1832,	1.	61110,	0.	21211,	1.	95275
1833,	1.	46033,	0.	33580,	1.	90550
1835,	1.	56963,	0.	42058,	1.	95275
1843,	1.	87500,	0.		1.	81100
1846,	2.	37500,	0.		1.	81100
1847,	2.	12045,	0.	13906,	1.	81100
1848,	2.	12500,	0.		1.	85825
1849,	2.	61937,	0.	17177,	1.	81100
1850,	2.	62500,	0.		1.	85825
1851,	1.	85896,	0.	24474,	1.	81100
1854,	2.	35468,	0.	31000,	1.	81100
1855,	2.	08418,	0.	41449,	1.	81100
1856,	2.	10682,	0.	27737,	1.	85825
1857,	2.	57458,	0.	51202,	1.	81100
1858,	2.	60254,	0.	34263,	1.	85825
1859,	1.	81111,	0.	48529,	1.	81100
1861,	2.	29407,	0.	61470,	1.	81100
1862,	2.	05259,	0.	54999,	1.	85825
1863,	2.	53556,	0.	67940,	1.	85825
1864,	1.	87500,	0.		1.	90550
1867,	2.	37500,	0.		1.	90550
1868,	2.	12045,	0.	13906,	1.	90550
1869,	2.	12500,	0.		1.	95275
1870,	2.	61937,	0.	17177,	1.	90550
1871,	2.	62500,	0.		1.	95275
1872,	1.	85896,	0.	24474,	1.	90550
1875,	2.	35468,	0.	31000,	1.	90550
1876,	2.	08418,	0.	41449,	1.	90550

1877,	2.	10682,	0.	27737,	1.	95275
1878,	2.	57458,	0.	51202,	1.	90550
1879,	2.	60254,	0.	34263,	1.	95275
1880,	1.	81111,	0.	48529,	1.	90550
1882,	2.	29407,	0.	61470,	1.	90550
1883,	2.	05259,	0.	54999,	1.	95275
1884,	2.	53556,	0.	67940,	1.	95275
1898,	0.	21779,	0.	07394,	1.	81100
1900,	0.	33616,	0.	11412,	1.	81100
1902,	0.	27023,	0.	11193,	1.	81100
1903,	0.	20628,	0.	10172,	1.	81100
1904,	0.	21249,	0.	08802,	1.	85825
1905,	0.	31840,	0.	15700,	1.	81100
1906,	0.	32798,	0.	13585,	1.	85825
1907,	0.	25331,	0.	14625,	1.	81100
1908,	0.	19919,	0.	11500,	1.	85825
1909,	0.	30744,	0.	17750,	1.	85825
1911,	0.	21779,	0.	07394,	1.	90550
1913,	0.	33616,	0.	11412,	1.	90550
1915,	0.	27023,	0.	11193,	1.	90550
1916,	0.	20628,	0.	10172,	1.	90550
1917,	0.	21249,	0.	08802,	1.	95275
1918,	0.	31840,	0.	15700,	1.	90550
1919,	0.	32798,	0.	13585,	1.	95275
1920,	0.	25331,	0.	14625,	1.	90550
1921,	0.	19919,	0.	11500,	1.	95275
1922,	0.	30744,	0.	17750,	1.	95275
1924,	0.	21779,	0.	07394,	2.	00000
1926,	0.	27023,	0.	11193,	2.	00000
1927,	0.	20628,	0.	10172,	2.	00000
1929,	0.	25331,	0.	14625,	2.	00000
1934,	0.	59244,	0.	21222,	1.	81100
1936,	0.	84870,	0.	31065,	1.	81100
1938,	0.	45809,	0.	19446,	1.	81100
1941,	0.	71831,	0.	31166,	1.	81100
1942,	0.	58329,	0.	29329,	1.	81100
1943,	0.	58820,	0.	25306,	1.	85825
1944,	0.	84814,	0.	42989,	1.	81100
1945,	0.	84842,	0.	37027,	1.	85825
1946,	0.	44254,	0.	25550,	1.	81100
1948,	0.	71276,	0.	41151,	1.	81100
1949,	0.	57765,	0.	33351,	1.	85825
1950,	0.	84786,	0.	48951,	1.	85825
1955,	0.	59244,	0.	21222,	1.	90550
1957,	0.	84870,	0.	31065,	1.	90550
1959,	0.	45809,	0.	19446,	1.	90550
1962,	0.	71831,	0.	31166,	1.	90550
1963,	0.	58329,	0.	29329,	1.	90550
1964,	0.	58820,	0.	25306,	1.	95275
1965,	0.	84814,	0.	42989,	1.	90550
1966,	0.	84842,	0.	37027,	1.	95275
1967,	0.	44254,	0.	25550,	1.	90550
1969,	0.	71276,	0.	41151,	1.	90550
1970,	0.	57765,	0.	33351,	1.	95275
1971,	0.	84786,	0.	48951,	1.	95275
1988,	0.	96658,	0.	38655,	1.	81100
1990,	1.	09997,	0.	42501,	1.	81100
1992,	0.	90696,	0.	41062,	1.	81100
1995,	1.	03340,	0.	47328,	1.	81100
1996,	0.	97145,	0.	50370,	1.	81100
1997,	0.	96901,	0.	44512,	1.	85825
1998,	1.	09992,	0.	56502,	1.	81100

1999,	1.	09995,	0.	49501,	1.	85825
2000,	0.	91087,	0.	52589,	1.	81100
2002,	1.	03689,	0.	59865,	1.	81100
2003,	0.	97388,	0.	56227,	1.	85825
2004,	1.	09989,	0.	63502,	1.	85825
2009,	0.	96658,	0.	38655,	1.	90550
2011,	1.	09997,	0.	42501,	1.	90550
2013,	0.	90696,	0.	41062,	1.	90550
2016,	1.	03340,	0.	47328,	1.	90550
2017,	0.	97145,	0.	50370,	1.	90550
2018,	0.	96901,	0.	44512,	1.	95275
2019,	1.	09992,	0.	56502,	1.	90550
2020,	1.	09995,	0.	49501,	1.	95275
2021,	0.	91087,	0.	52589,	1.	90550
2023,	1.	03689,	0.	59865,	1.	90550
2024,	0.	97388,	0.	56227,	1.	95275
2025,	1.	09989,	0.	63502,	1.	95275
2042,	1.	23326,	0.	42287,	1.	81100
2044,	1.	35104,	0.	38328,	1.	81100
2046,	1.	16486,	0.	50948,	1.	81100
2049,	1.	29097,	0.	51961,	1.	81100
2050,	1.	22809,	0.	61265,	1.	81100
2051,	1.	23067,	0.	51776,	1.	85825
2052,	1.	35108,	0.	64780,	1.	81100
2053,	1.	35106,	0.	51554,	1.	85825
2054,	1.	16270,	0.	67128,	1.	81100
2056,	1.	28830,	0.	74380,	1.	81100
2057,	1.	22550,	0.	70754,	1.	85825
2058,	1.	35110,	0.	78006,	1.	85825
2063,	1.	23326,	0.	42287,	1.	90550
2065,	1.	35104,	0.	38328,	1.	90550
2067,	1.	16486,	0.	50948,	1.	90550
2070,	1.	29097,	0.	51961,	1.	90550
2071,	1.	22809,	0.	61265,	1.	90550
2072,	1.	23067,	0.	51776,	1.	95275
2073,	1.	35108,	0.	64780,	1.	90550
2074,	1.	35106,	0.	51554,	1.	95275
2075,	1.	16270,	0.	67128,	1.	90550
2077,	1.	28830,	0.	74380,	1.	90550
2078,	1.	22550,	0.	70754,	1.	95275
2079,	1.	35110,	0.	78006,	1.	95275
2095,	1.	53874,	0.	52239,	1.	81100
2097,	1.	42618,	0.	56870,	1.	81100
2100,	1.	45744,	0.	71867,	1.	81100
2101,	1.	50130,	0.	62186,	1.	85825
2102,	1.	37920,	0.	79628,	1.	81100
2104,	1.	40729,	0.	81250,	1.	85825
2108,	1.	53874,	0.	52239,	1.	90550
2110,	1.	42618,	0.	56870,	1.	90550
2113,	1.	45744,	0.	71867,	1.	90550
2114,	1.	50130,	0.	62186,	1.	95275
2115,	1.	37920,	0.	79628,	1.	90550
2117,	1.	40729,	0.	81250,	1.	95275
2129,	2.	01220,	0.	68313,	1.	81100
2131,	2.	48566,	0.	84387,	1.	81100
2133,	1.	73227,	0.	71753,	1.	81100
2136,	2.	19421,	0.	90887,	1.	81100
2137,	1.	90589,	0.	93980,	1.	81100
2138,	1.	96324,	0.	81320,	1.	85825
2139,	2.	35433,	1.	16093,	1.	81100
2140,	2.	42518,	1.	00454,	1.	85825
2141,	1.	62380,	0.	93750,	1.	81100

2143,	2.	05681,	1.	18750,	1.	81100
2144,	1.	84030,	1.	06250,	1.	85825
2145,	2.	27332,	1.	31250,	1.	85825
2150,	2.	01220,	0.	68313,	1.	90550
2152,	2.	48566,	0.	84387,	1.	90550
2154,	1.	73227,	0.	71753,	1.	90550
2157,	2.	19421,	0.	90887,	1.	90550
2158,	1.	90589,	0.	93980,	1.	90550
2159,	1.	96324,	0.	81320,	1.	95275
2160,	2.	35433,	1.	16093,	1.	90550
2161,	2.	42518,	1.	00454,	1.	95275
2162,	1.	62380,	0.	93750,	1.	90550
2164,	2.	05681,	1.	18750,	1.	90550
2165,	1.	84030,	1.	06250,	1.	95275
2166,	2.	27332,	1.	31250,	1.	95275
2179,	0.	31575,	0.		1.	04000
2180,	0.	25204,	0.	01652,	1.	04000
2181,	0.	24882,	0.		1.	16850
2182,	0.	37810,	0.	02478,	1.	04000
2183,	0.	37493,	0.		1.	16850
2184,	0.	31305,	0.	04121,	1.	04000
2185,	0.	24773,	0.	04928,	1.	04000
2186,	0.	24669,	0.	03248,	1.	16850
2187,	0.	37163,	0.	07392,	1.	04000
2188,	0.	37172,	0.	04894,	1.	16850
2189,	0.	30499,	0.	08172,	1.	04000
2190,	0.	24034,	0.	06440,	1.	16850
2191,	0.	36215,	0.	09704,	1.	16850
2192,	0.	30800,	0.		1.	29700
2193,	0.	24453,	0.	01603,	1.	29700
2194,	0.	24129,	0.		1.	42550
2195,	0.	37015,	0.	02426,	1.	29700
2196,	0.	36696,	0.		1.	42550
2197,	0.	30536,	0.	04020,	1.	29700
2198,	0.	24035,	0.	04781,	1.	29700
2199,	0.	23923,	0.	03149,	1.	42550
2200,	0.	36381,	0.	07236,	1.	29700
2201,	0.	36382,	0.	04790,	1.	42550
2202,	0.	29750,	0.	07972,	1.	29700
2203,	0.	23307,	0.	06245,	1.	42550
2204,	0.	35445,	0.	09498,	1.	42550
2205,	0.	30025,	0.		1.	55400
2206,	0.	23702,	0.	01554,	1.	55400
2207,	0.	23376,	0.		1.	68250
2208,	0.	36219,	0.	02375,	1.	55400
2209,	0.	35899,	0.		1.	68250
2210,	0.	29768,	0.	03919,	1.	55400
2211,	0.	23296,	0.	04633,	1.	55400
2212,	0.	23176,	0.	03051,	1.	68250
2213,	0.	35600,	0.	07080,	1.	55400
2214,	0.	35591,	0.	04686,	1.	68250
2215,	0.	29002,	0.	07771,	1.	55400
2216,	0.	22580,	0.	06050,	1.	68250
2217,	0.	34675,	0.	09291,	1.	68250
2225,	0.	46446,	0.		1.	04000
2228,	0.	63554,	0.		1.	04000
2229,	0.	55319,	0.	04917,	1.	04000
2230,	0.	55000,	0.		1.	16850
2231,	0.	72833,	0.	07393,	1.	04000
2232,	0.	72507,	0.		1.	16850
2233,	0.	46924,	0.	07334,	1.	04000
2236,	0.	65639,	0.	12110,	1.	04000

2237.	0	57791.	0.	14138.	1	04000
2238.	0	56268.	0	09620.	1	16850
2239.	0	78491.	0.	21052.	1	04000
2240.	0	75364.	0.	14346.	1	16850
2241.	0	48252.	0.	14053.	1	04000
2243.	0	71555.	0	22547.	1	04000
2244.	0	59852.	0	18108.	1	16850
2245.	0	83489.	0.	26511.	1	16850
2246.	0	46047.	0.		1	29700
2249.	0	63953.	0.		1	29700
2250.	0	55314.	0.	04819.	1	29700
2251.	0	55000.	0.		1	42550
2252.	0	73618.	0.	07248.	1	29700
2253.	0	73304.	0.		1	42550
2254.	0	46515.	0.	07180.	1	29700
2257.	0	65993.	0.	11856.	1	29700
2258.	0	57730.	0	13836.	1	29700
2259.	0	56241.	0	09416.	1	42550
2260.	0	79149.	0.	20600.	1	29700
2261.	0	76099.	0.	14042.	1	42550
2262.	0	47815.	0.	13758.	1	29700
2264.	0	71785.	0	22072.	1	29700
2265.	0	59749.	0.	17723.	1	42550
2266.	0	84052.	0.	25948.	1	42550
2267.	0	45649.	0.		1	55400
2270.	0	64351.	0.		1	55400
2271.	0	55304.	0.	04684.	1	55400
2272.	0	55000.	0.		1	68250
2273.	0	74398.	0.	07076.	1	55400
2274.	0	74101.	0		1	68250
2275.	0	46107.	0	07026.	1	55400
2278.	0	66347.	0.	11602.	1	55400
2279.	0	57669.	0.	13533.	1	55400
2280.	0	56213.	0	09212.	1	68250
2281.	0	79822.	0.	20171.	1	55400
2282.	0	76835.	0.	13737.	1	68250
2283.	0	47379.	0.	13462.	1	55400
2285.	0	72016.	0	21598.	1	55400
2286.	0	59646.	0	17338.	1	68250
2287.	0	84616.	0	25384.	1	68250
2300.	0	87673.	0.	22327.	1	04000
2301.	0	88996.	0.	14033.	1	04000
2302.	0	92406.	0	17594.	1	16850
2305.	0	80832.	0	12081.	1	04000
2306.	0	85225.	0.	04929.	1	04000
2307.	0	87014.	0.	09521.	1	16850
2310.	0	78425.	0.		1	04000
2311.	0	85118.	0		1	16850
2313.	0	88221.	0.	21779.	1	29700
2314.	0	89619.	0.	13609.	1	29700
2315.	0	92938.	0.	17062.	1	42550
2318.	0	81547.	0	11785.	1	29700
2319.	0	85965.	0	04788.	1	29700
2320.	0	87709.	0	09233.	1	42550
2323.	0	79200.	0.		1	29700
2324.	0	85871.	0		1	42550
2326.	0	88769.	0	21231.	1	55400
2327.	0	90252.	0	13200.	1	55400
2328.	0	93470.	0	16530.	1	68250
2331.	0	82262.	0	11489.	1	55400
2332.	0	86702.	0	04630.	1	55400
2333.	0	88403.	0	08946.	1	68250

2336.	0.	79975.	0.		1.	55400
2337.	0.	86624.	0.		1.	68250
2346.	1.	10000.	0	31575.	1.	04000
2347.	1.	05068.	0	24785.	1.	04000
2348.	1.	10000.	0	24882.	1.	16850
2349.	1.	02606.	0.	37167.	1.	04000
2350.	1.	10000.	0.	37493.	1.	16850
2351.	0.	97913.	0.	29168.	1.	04000
2352.	0	95955.	0	20995.	1.	04000
2353.	1.	00471.	0.	22986.	1.	16850
2354.	0.	88947.	0	31509.	1.	04000
2355.	0.	95653.	0.	34636.	1.	16850
2359.	1.	10000.	0.	30800.	1.	29700
2360.	1.	05209.	0.	24042.	1.	29700
2361.	1.	10000.	0.	24129.	1.	42550
2362.	1.	02752.	0.	36382.	1.	29700
2363.	1.	10000.	0.	36696.	1.	42550
2364.	0.	98211.	0	28453.	1.	29700
2365.	0.	96383.	0.	20375.	1.	29700
2366.	1.	00762.	0.	22292.	1.	42550
2367.	0.	89400.	0.	30851.	1.	29700
2368.	0.	95958.	0.	33900.	1.	42550
2372.	1.	10000.	0.	30025.	1.	55400
2373.	1.	05368.	0.	23301.	1.	55400
2374.	1.	10000.	0.	23376.	1.	68250
2375.	1.	02924.	0.	35602.	1.	55400
2376.	1.	10000.	0.	35899.	1.	68250
2377.	0	98509.	0.	27738.	1.	55400
2378.	0.	96796.	0.	19745.	1.	55400
2379.	1.	01053.	0.	21597.	1.	68250
2380.	0.	89829.	0.	30178.	1.	55400
2381.	0.	96262.	0.	33165.	1.	68250
2392.	1.	31016.	0.	23440.	1.	04000
2393.	1.	24034.	0.	21004.	1.	04000
2394.	1.	27594.	0.	17594.	1.	16850
2395.	1.	28487.	0.	32120.	1.	04000
2396.	1.	34328.	0.	28367.	1.	16850
2397.	1.	21094.	0.	28989.	1.	04000
2398.	1.	14928.	0.	24775.	1.	04000
2399.	1.	19521.	0.	22986.	1.	16850
2400.	1.	16341.	0.	36574.	1.	04000
2401.	1.	22700.	0.	34336.	1.	16850
2405.	1.	30905.	0.	22521.	1.	29700
2406.	1.	23610.	0.	20381.	1.	29700
2407.	1.	27062.	0.	17062.	1.	42550
2408.	1.	28890.	0.	31259.	1.	29700
2409.	1.	34637.	0.	27061.	1.	42550
2410.	1.	21127.	0.	28334.	1.	29700
2411.	1.	14788.	0.	24035.	1.	29700
2412.	1.	19233.	0.	22291.	1.	42550
2413.	1.	16547.	0.	35986.	1.	29700
2414.	1.	23054.	0.	33721.	1.	42550
2418.	1.	30794.	0.	21602.	1.	55400
2419.	1.	23200.	0.	19748.	1.	55400
2420.	1.	26530.	0.	16530.	1.	68250
2421.	1.	29293.	0.	30397.	1.	55400
2422.	1.	34947.	0.	25755.	1.	68250
2423.	1.	21160.	0.	27679.	1.	55400
2424.	1.	14630.	0	23298.	1.	55400
2425.	1.	18946.	0.	21597.	1.	68250
2426.	1.	16726.	0.	35405.	1.	55400
2427.	1.	23408.	0.	33105.	1.	68250

2438.	1	38187.	0.		1	04000
2439.	1	34775.	0.	04929.	1	04000
2440.	1	34882.	0.		1	16850
2441.	1	40676.	0.	07519.	1	04000
2442.	1	41847.	0.		1	16850
2443.	1	36348.	0	12300.	1	04000
2444.	1	31004.	0.	14034.	1	04000
2445.	1	32986.	0.	09521.	1	16850
2446.	1	37189.	0	22146.	1	04000
2447.	1	39935.	0.	14711.	1	16850
2451.	1	38542.	0.		1	29700
2452.	1	34035.	0.	04789.	1	29700
2453.	1	34129.	0.		1	42550
2454.	1	42059.	0.	07304.	1	29700
2455.	1	43308.	0.		1	42550
2456.	1	36573.	0.	11931.	1	29700
2457.	1	30381.	0.	13609.	1	29700
2458.	1	32291.	0.	09233.	1	42550
2459.	1	37971.	0	21329.	1	29700
2460.	1	41080.	0.	14261.	1	42550
2464.	1	38896.	0.		1	55400
2465.	1	33298.	0	04630.	1	55400
2466.	1	33376.	0.		1	68250
2467.	1	43438.	0.	07117.	1	55400
2468.	1	44769.	0.		1	68250
2469.	1	36798.	0.	11562.	1	55400
2470.	1	29748.	0	13200.	1	55400
2471.	1	31597.	0.	08946.	1	68250
2472.	1	38753.	0.	20512.	1	55400
2473.	1	42225.	0.	13810.	1	68250
2484.	1	51808.	0		1	04000
2487.	1	62152.	0	10628.	1	04000
2488.	1	62500.	0		1	16850
2489.	1	50236.	0.	18073.	1	04000
2492.	1	59378.	0.	31702.	1	04000
2493.	1	61110.	0.	21210.	1	16850
2494.	1	45565.	0.	35552.	1	04000
2496.	1	56963.	0	42058.	1	16850
2497.	1	52539.	0.		1	29700
2500.	1	62152.	0	10630.	1	29700
2501.	1	62500.	0.		1	42550
2502.	1	50809.	0.	17848.	1	29700
2505.	1	59378.	0.	31700.	1	29700
2506.	1	61110.	0.	21210.	1	42550
2507.	1	45721.	0.	34895.	1	29700
2509.	1	56963.	0.	42058.	1	42550
2510.	1	53269.	0.		1	55400
2513.	1	62152.	0.	10632.	1	55400
2514.	1	62500.	0.		1	68250
2515.	1	51381.	0	17623.	1	55400
2518.	1	59378.	0.	31698.	1	55400
2519.	1	61110.	0.	21211.	1	68250
2520.	1	45877.	0.	34237.	1	55400
2522.	1	56963.	0	42058.	1	68250
2530.	1	87500.	0		1	04000
2533.	2	37500.	0		1	04000
2534.	2	12045.	0	13906.	1	04000
2535.	2	12500.	0		1	16850
2536.	2	61937.	0.	17177.	1	04000
2537.	2	62500.	0		1	16850
2538.	1	85896.	0.	24474.	1	04000
2541.	2	35468.	0.	31000.	1	04000

2542,	2.	08418,	0.	41449,	1.	04000
2543,	2.	10682,	0.	27737,	1.	16850
2544,	2.	57458,	0.	51202,	1.	04000
2545,	2.	60254,	0.	34263,	1.	16850
2546,	1.	81111,	0.	48529,	1.	04000
2548,	2.	29407,	0.	61470,	1.	04000
2549,	2.	05259,	0.	54999,	1.	16850
2550,	2.	53556,	0.	67940,	1.	16850
2551,	1.	87500,	0.		1.	29700
2554,	2.	37500,	0.		1.	29700
2555,	2.	12045,	0.	13906,	1.	29700
2556,	2.	12500,	0.		1.	42550
2557,	2.	61937,	0.	17177,	1.	29700
2558,	2.	62500,	0.		1.	42550
2559,	1.	85896,	0.	24474,	1.	29700
2562,	2.	35468,	0.	31000,	1.	29700
2563,	2.	08418,	0.	41449,	1.	29700
2564,	2.	10682,	0.	27737,	1.	42550
2565,	2.	57458,	0.	51202,	1.	29700
2566,	2.	60254,	0.	34263,	1.	42550
2567,	1.	81111,	0.	48529,	1.	29700
2569,	2.	29407,	0.	61470,	1.	29700
2570,	2.	05259,	0.	54999,	1.	42550
2571,	2.	53556,	0.	67940,	1.	42550
2572,	1.	87500,	0.		1.	55400
2575,	2.	37500,	0.		1.	55400
2576,	2.	12045,	0.	13906,	1.	55400
2577,	2.	12500,	0.		1.	68250
2578,	2.	61937,	0.	17177,	1.	55400
2579,	2.	62500,	0.		1.	68250
2580,	1.	85896,	0.	24474,	1.	55400
2583,	2.	35468,	0.	31000,	1.	55400
2584,	2.	08418,	0.	41449,	1.	55400
2585,	2.	10682,	0.	27737,	1.	68250
2586,	2.	57458,	0.	51202,	1.	55400
2587,	2.	60254,	0.	34263,	1.	68250
2588,	1.	81111,	0.	48529,	1.	55400
2590,	2.	29407,	0.	61470,	1.	55400
2591,	2.	05259,	0.	54999,	1.	68250
2592,	2.	53556,	0.	67940,	1.	68250
2606,	0.	23918,	0.	08119,	1.	04000
2608,	0.	35880,	0.	12180,	1.	04000
2610,	0.	29171,	0.	12083,	1.	04000
2611,	0.	22653,	0.	11171,	1.	04000
2612,	0.	22988,	0.	09522,	1.	16850
2613,	0.	33984,	0.	16759,	1.	04000
2614,	0.	34639,	0.	14348,	1.	16850
2615,	0.	27344,	0.	15787,	1.	04000
2616,	0.	21548,	0.	12441,	1.	16850
2617,	0.	32470,	0.	18746,	1.	16850
2619,	0.	23205,	0.	07877,	1.	29700
2621,	0.	35125,	0.	11924,	1.	29700
2623,	0.	28455,	0.	11787,	1.	29700
2624,	0.	21978,	0.	10838,	1.	29700
2625,	0.	22292,	0.	09234,	1.	42550
2626,	0.	33269,	0.	16406,	1.	29700
2627,	0.	33902,	0.	14043,	1.	42550
2628,	0.	26673,	0.	15400,	1.	29700
2629,	0.	20896,	0.	12065,	1.	42550
2630,	0.	31779,	0.	18348,	1.	42550
2632,	0.	22492,	0.	07636,	1.	55400
2634,	0.	34371,	0.	11668,	1.	55400



2636.	0	27739.	0.	11490.	1	55400
2637.	0	21303.	0	10505.	1	55400
2638.	0	21597.	0	08946.	1	68250
2639.	0	32554.	0	16053.	1	55400
2640.	0	33166.	0	13738.	1	68250
2641.	0	26002.	0	15012.	1	55400
2642.	0	20245.	0	11688.	1	68250
2643.	0	31089.	0	17949.	1	68250
2655.	0	59545.	0	22127.	1	04000
2657.	0	83206.	0	32104.	1	04000
2659.	0	47056.	0	20229.	1	04000
2662.	0	71155.	0	31686.	1	04000
2663.	0	58596.	0	29728.	1	04000
2664.	0	59058.	0	25849.	1	16850
2665.	0	83203.	0	42726.	1	04000
2666.	0	83477.	0	37350.	1	16850
2667.	0	45412.	0	26218.	1	04000
2669.	0	70605.	0	40764.	1	04000
2670.	0	57968.	0	33468.	1	16850
2671.	0	83466.	0	48189.	1	16850
2676.	0	59444.	0	21825.	1	29700
2678.	0	83760.	0	31758.	1	29700
2680.	0	46640.	0	19968.	1	29700
2683.	0	71380.	0	31513.	1	29700
2684.	0	58507.	0	29595.	1	29700
2685.	0	58963.	0	25632.	1	42550
2686.	0	83740.	0	42814.	1	29700
2687.	0	84023.	0	37221.	1	42550
2688.	0	45026.	0	25996.	1	29700
2690.	0	70829.	0	40893.	1	29700
2691.	0	57887.	0	33421.	1	42550
2692.	0	83994.	0	48494.	1	42550
2697.	0	59344.	0	21524.	1	55400
2699.	0	84315.	0	31411.	1	55400
2701.	0	46225.	0	19707.	1	55400
2704.	0	71606.	0	31340.	1	55400
2705.	0	58418.	0	29462.	1	55400
2706.	0	58867.	0	25415.	1	68250
2707.	0	84277.	0	42901.	1	55400
2708.	0	84569.	0	37092.	1	68250
2709.	0	44640.	0	25773.	1	55400
2711.	0	71052.	0	41022.	1	55400
2712.	0	57806.	0	33374.	1	68250
2713.	0	84522.	0	48799.	1	68250
2730.	0	95782.	0	40199.	1	04000
2732.	1	10012.	0	44303.	1	04000
2734.	0	89431.	0	41710.	1	04000
2737.	1	02890.	0	48383.	1	04000
2738.	0	96345.	0	50591.	1	04000
2739.	0	96203.	0	45248.	1	16850
2740.	1	10037.	0	57126.	1	04000
2741.	1	10020.	0	50512.	1	16850
2742.	0	89914.	0	51912.	1	04000
2744.	1	03338.	0	59662.	1	04000
2745.	0	96753.	0	55860.	1	16850
2746.	1	10040.	0	63531.	1	16850
2751.	0	96074.	0	39684.	1	29700
2753.	1	10007.	0	43702.	1	29700
2755.	0	89852.	0	41494.	1	29700
2758.	1	03076.	0	48045.	1	29700
2759.	0	96611.	0	50517.	1	29700
2760.	0	96482.	0	44954.	1	42550

2761.	1.	10022.	0.	56918.	1.	29700
2762.	1.	10010.	0.	50108.	1.	42550
2763.	0.	90305.	0.	52138.	1.	29700
2765.	1.	03455.	0.	59730.	1.	29700
2766.	0.	97007.	0.	56007.	1.	42550
2767.	1.	10020.	0.	63520.	1.	42550
2772.	0.	96366.	0.	39170.	1.	55400
2774.	1.	10002.	0.	43101.	1.	55400
2776.	0.	90274.	0.	41278.	1.	55400
2779.	1.	03208.	0.	47687.	1.	55400
2780.	0.	96878.	0.	50443.	1.	55400
2781.	0.	96762.	0.	44659.	1.	68250
2782.	1.	10007.	0.	56710.	1.	55400
2783.	1.	10000.	0.	49703.	1.	68250
2784.	0.	90696.	0.	52363.	1.	55400
2786.	1.	03572.	0.	59797.	1.	55400
2787.	0.	97261.	0.	56154.	1.	68250
2788.	1.	10000.	0.	63508.	1.	68250
2805.	1.	21686.	0.	43135.	1.	04000
2807.	1.	32779.	0.	40124.	1.	04000
2809.	1.	15330.	0.	51329.	1.	04000
2812.	1.	25886.	0.	51563.	1.	04000
2813.	1.	19553.	0.	59958.	1.	04000
2814.	1.	21085.	0.	51645.	1.	16850
2815.	1.	28936.	0.	62126.	1.	04000
2816.	1.	31713.	0.	51226.	1.	16850
2817.	1.	14156.	0.	65908.	1.	04000
2819.	1.	22370.	0.	70650.	1.	04000
2820.	1.	18978.	0.	68692.	1.	16850
2821.	1.	27915.	0.	73852.	1.	16850
2826.	1.	22233.	0.	42840.	1.	29700
2828.	1.	33554.	0.	39525.	1.	29700
2830.	1.	15732.	0.	51205.	1.	29700
2833.	1.	26961.	0.	51696.	1.	29700
2834.	1.	20638.	0.	60382.	1.	29700
2835.	1.	21878.	0.	51697.	1.	42550
2836.	1.	30993.	0.	63011.	1.	29700
2837.	1.	33070.	0.	51357.	1.	42550
2838.	1.	14861.	0.	66315.	1.	29700
2840.	1.	24523.	0.	71893.	1.	29700
2841.	1.	20406.	0.	69517.	1.	42550
2842.	1.	30793.	0.	75514.	1.	42550
2847.	1.	22778.	0.	42581.	1.	55400
2849.	1.	34329.	0.	38927.	1.	55400
2851.	1.	16087.	0.	51074.	1.	55400
2854.	1.	28031.	0.	51829.	1.	55400
2855.	1.	21722.	0.	60840.	1.	55400
2856.	1.	22671.	0.	51750.	1.	68250
2857.	1.	33051.	0.	63895.	1.	55400
2858.	1.	34428.	0.	51488.	1.	68250
2859.	1.	15565.	0.	66722.	1.	55400
2861.	1.	26677.	0.	73137.	1.	55400
2862.	1.	21835.	0.	70342.	1.	68250
2863.	1.	33671.	0.	77175.	1.	68250
2879.	1.	53876.	0.	52234.	1.	04000
2881.	1.	40583.	0.	56672.	1.	04000
2884.	1.	45742.	0.	71872.	1.	04000
2885.	1.	50130.	0.	62186.	1.	16850
2886.	1.	33603.	0.	77136.	1.	04000
2888.	1.	40729.	0.	81250.	1.	16850
2892.	1.	53876.	0.	52236.	1.	29700
2894.	1.	41261.	0.	56738.	1.	29700

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2898,	1	50130,	0	62186,	1	42550
2899,	1	35042,	0	77966,	1	29700
2901,	1	40729,	0	81250,	1	42550
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2910,	1	45744,	0	71869,	1	55400
2911,	1	50130,	0	62186,	1	68250
2912,	1	36481,	0	78797,	1	55400
2914,	1	40729,	0	81250,	1	68250
2926,	2	01220,	0	68313,	1	04000
2928,	2	48566,	0	84387,	1	04000
2930,	1	73227,	0	71753,	1	04000
2933,	2	19421,	0	90887,	1	04000
2934,	1	90589,	0	93980,	1	04000
2935,	1	96324,	0	81320,	1	16850
2936,	2	35433,	1	16093,	1	04000
2937,	2	42518,	1	00454,	1	16850
2938,	1	62380,	0	93750,	1	04000
2940,	2	05681,	1	18750,	1	04000
2941,	1	84030,	1	06250,	1	16850
2942,	2	27332,	1	31250,	1	16850
2947,	2	01220,	0	68313,	1	29700
2949,	2	48566,	0	84387,	1	29700
2951,	1	73227,	0	71753,	1	29700
2954,	2	19421,	0	90887,	1	29700
2955,	1	90589,	0	93980,	1	29700
2956,	1	96324,	0	81320,	1	42550
2957,	2	35433,	1	16093,	1	29700
2958,	2	42518,	1	00454,	1	42550
2959,	1	62380,	0	93750,	1	29700
2961,	2	05681,	1	18750,	1	29700
2962,	1	84030,	1	06250,	1	42550
2963,	2	27332,	1	31250,	1	42550
2968,	2	01220,	0	68313,	1	55400
2970,	2	48566,	0	84387,	1	55400
2972,	1	73227,	0	71753,	1	55400
2975,	2	19421,	0	90887,	1	55400
2976,	1	90589,	0	93980,	1	55400
2977,	1	96324,	0	81320,	1	68250
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2979,	2	42518,	1	00454,	1	68250
2980,	1	62380,	0	93750,	1	55400
2982,	2	05681,	1	18750,	1	55400
2983,	1	84030,	1	06250,	1	68250
2984,	2	27332,	1	31250,	1	68250
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3003,	0	26727,	0	05315,	0	36000
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3012,	0	25756,	0		0	87000

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3015.	0.	32321.	0.	04255.	0.	70000
3016.	0.	25750.	0.	05121.	0	70000
3017.	0.	25536.	0.	03362.	0.	87000
3018.	0.	38197.	0.	07597.	0.	70000
3019.	0.	38090.	0.	05015.	0.	87000
3020.	0.	31489.	0.	08437.	0.	70000
3021.	0	24879.	0.	06666.	0.	87000
3022.	0.	37109.	0.	09943.	0.	87000
3030.	0.	47500.	0.		0.	36000
3033.	0.	62500.	0.		0.	36000
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3035.	0.	55000.	0.		0.	53000
3036.	0.	70770.	0.	07810.	0.	36000
3037.	0.	70527.	0.		0	53000
3038.	0	48005.	0	07743.	0	36000
3041.	0.	64698.	0	12786.	0.	36000
3042.	0.	57939.	0.	14908.	0.	36000
3043.	0	56334.	0	10129.	0.	53000
3044.	0.	76737.	0.	22218.	0.	36000
3045.	0.	73533.	0.	15105.	0.	53000
3046.	0.	49407.	0.	14836.	0.	36000
3048.	0.	70946.	0.	23801.	0.	36000
3049.	0.	60108.	0.	19064.	0.	53000
3050.	0.	82089.	0.	27911.	0.	53000
3051.	0.	46973.	0.		0	70000
3054.	0.	63027.	0.		0.	70000
3055.	0.	55326.	0.	05023.	0.	70000
3056.	0.	55000.	0.		0.	87000
3057.	0.	71799.	0.	07587.	0.	70000
3058.	0.	71582.	0.		0.	87000
3059.	0.	47464.	0.	07538.	0.	70000
3062.	0.	65169.	0.	12448.	0.	70000
3063.	0.	57865.	0.	14523.	0.	70000
3064.	0	56299.	0.	09857.	0.	87000
3065.	0.	77622.	0.	21647.	0	70000
3066.	0.	74509.	0.	14700.	0.	87000
3067.	0.	48829.	0.	14445.	0.	70000
3069.	0.	71251.	0.	23174.	0.	70000
3070.	0.	59972.	0.	18555.	0	87000
3071.	0.	82834.	0	27166.	0.	87000
3084.	0	86224.	0.	23776.	0.	36000
3085.	0.	87340.	0.	15136.	0.	36000
3086.	0.	91083.	0	18917.	0.	53000
3089.	0	78935.	0.	12868.	0.	36000
3090.	0.	83274.	0.	05321.	0	36000
3091.	0.	85285.	0	10237.	0.	53000
3094.	0.	76375.	0.		0.	36000
3095.	0.	83248.	0.		0.	53000
3097.	0	86948.	0.	23052.	0.	70000
3098.	0.	88173.	0.	14593.	0.	70000
3099.	0.	91788.	0.	18212.	0.	87000
3102.	0.	79883.	0.	12475.	0.	70000
3103.	0.	84248.	0.	05115.	0.	70000
3104.	0.	86206.	0.	09856.	0.	87000
3107.	0.	77400.	0.		0.	70000
3108.	0.	84244.	0.		0.	87000
3117.	1.	10000.	0.	33625.	0.	36000
3118.	1	04679.	0.	26726.	0.	36000
3119.	1.	10000.	0	26752.	0.	53000
3120.	1.	02190.	0.	39230.	0.	36000

3121.	1	10000.	0	39473.	0	53000
3122.	0.	97132.	0.	31065.	0	36000
3123.	0.	94864.	0.	22660.	0	36000
3124.	0.	99760.	0.	24715.	0	53000
3125.	0.	87783.	0	33263.	0	36000
3126.	0	94895.	0.	36467.	0	53000
3130.	1.	10000.	0.	32600.	0	70000
3131.	1.	04883.	0.	25757.	0	70000
3132.	1.	10000.	0.	25756.	0.	87000
3133.	1.	02412.	0.	38201.	0	70000
3134.	1.	10000.	0.	38418.	0.	87000
3135.	0.	97523.	0.	30117.	0	70000
3136.	0	95418.	0	21833.	0	70000
3137.	1.	00137.	0.	23794.	0	87000
3138.	0.	88353.	0	32378.	0.	70000
3139.	0.	95299.	0.	35491.	0.	87000
3150.	1.	31311.	0.	25872.	0	36000
3151.	1.	25136.	0	22660.	0	36000
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3154.	1.	33558.	0.	31611.	0	53000
3155.	1.	21052.	0	30707.	0.	36000
3156.	1.	15321.	0.	26726.	0	36000
3157.	1.	20237.	0	24715.	0.	53000
3158.	1.	15838.	0	38119.	0	36000
3159.	1.	21888.	0.	35839.	0.	53000
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3164.	1.	24593.	0	21827.	0	70000
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3166.	1.	28001.	0	33238.	0	70000
3167.	1.	33968.	0.	29884.	0	87000
3168.	1.	21073.	0.	29848.	0	70000
3169.	1.	15115.	0.	25752.	0	70000
3170.	1.	19856.	0.	23794.	0.	87000
3171.	1.	16089.	0.	37346.	0.	70000
3172.	1.	22311.	0.	35042.	0.	87000
3183.	1.	36726.	0.	05321.	0.	36000
3184.	1.	36752.	0.		0.	53000
3185.	1.	37003.	0.	08234.	0.	36000
3186.	1.	38217.	0.		0.	53000
3187.	1.	35720.	0	13421.	0	36000
3188.	1.	32660.	0.	15136.	0	36000
3189.	1.	34715.	0	10237.	0.	53000
3190.	1.	35043.	0.	24517.	0	36000
3191.	1.	37040.	0.	16044.	0.	53000
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3196.	1.	35752.	0.	05115.	0.	70000
3197.	1.	35756.	0.		0	87000
3198.	1.	38840.	0	07876.	0.	70000
3199.	1.	40150.	0		0	87000
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3202.	1.	33794.	0.	09856.	0.	87000
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3218.	1.	62152.	0.	10634.	0.	36000
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3220.	1.	48687.	0.	18812.	0.	36000
3223.	1.	59379.	0.	31697.	0.	36000
3224.	1.	61110.	0	21210.	0	53000
3225.	1.	45152.	0.	37291.	0.	36000

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3233,	1.	49462,	0.	18442,	0.	70000
3236,	1.	59378,	0.	31699,	0.	70000
3237,	1.	61110,	0.	21210,	0.	87000
3238,	1.	45358,	0.	36421,	0.	70000
3240,	1.	56963,	0.	42058,	0.	87000
3249,	0.	25804,	0.	08760,	0.	36000
3251,	0.	37877,	0.	12859,	0.	36000
3253,	0.	31065,	0.	12868,	0.	36000
3254,	0.	24440,	0.	12052,	0.	36000
3255,	0.	24716,	0.	10238,	0.	53000
3256,	0.	35876,	0.	17690,	0.	36000
3257,	0.	36468,	0.	15106,	0.	53000
3258,	0.	29120,	0.	16813,	0.	36000
3259,	0.	23168,	0.	13376,	0.	53000
3260,	0.	34184,	0.	19736,	0.	53000
3262,	0.	24861,	0.	08440,	0.	70000
3264,	0.	36879,	0.	12519,	0.	70000
3266,	0.	30118,	0.	12475,	0.	70000
3267,	0.	23547,	0.	11611,	0.	70000
3268,	0.	23796,	0.	09856,	0.	87000
3269,	0.	34930,	0.	17225,	0.	70000
3270,	0.	35494,	0.	14702,	0.	87000
3271,	0.	28232,	0.	16300,	0.	70000
3272,	0.	22306,	0.	12878,	0.	87000
3273,	0.	33271,	0.	19209,	0.	87000
3285,	0.	59809,	0.	22926,	0.	36000
3287,	0.	81738,	0.	33021,	0.	36000
3289,	0.	48156,	0.	20920,	0.	36000
3292,	0.	70559,	0.	32145,	0.	36000
3293,	0.	58831,	0.	30078,	0.	36000
3294,	0.	59295,	0.	26389,	0.	53000
3295,	0.	81783,	0.	42494,	0.	36000
3296,	0.	82121,	0.	37672,	0.	53000
3297,	0.	46432,	0.	26808,	0.	36000
3299,	0.	70014,	0.	40423,	0.	36000
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3317,	0.	82843,	0.	37500,	0.	87000
3318,	0.	45922,	0.	26513,	0.	70000
3320,	0.	70310,	0.	40593,	0.	70000
3321,	0.	58062,	0.	33522,	0.	87000
3322,	0.	82853,	0.	47835,	0.	87000
3339,	0.	95008,	0.	41566,	0.	36000
3341,	1.	10026,	0.	45892,	0.	36000
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3346,	1.	02565,	0.	49343,	0.	36000
3347,	0.	95639,	0.	50788,	0.	36000
3348,	0.	95508,	0.	45982,	0.	53000
3349,	1.	10077,	0.	57676,	0.	36000
3350,	1.	10045,	0.	51517,	0.	53000
3351,	0.	88879,	0.	51314,	0.	36000

3353,	1.	03028,	0.	59484,	0.	36000
3354,	0.	96122,	0.	55496,	0.	53000
3355,	1.	10090,	0.	63560,	0.	53000
3360,	0.	95395,	0.	40883,	0.	70000
3362,	1.	10019,	0.	45097,	0.	70000
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3367,	1.	02755,	0.	48873,	0.	70000
3368,	0.	95992,	0.	50690,	0.	70000
3369,	0.	95878,	0.	45591,	0.	87000
3370,	1.	10057,	0.	57401,	0.	70000
3371,	1.	10032,	0.	50982,	0.	87000
3372,	0.	89397,	0.	51613,	0.	70000
3374,	1.	03183,	0.	59573,	0.	70000
3375,	0.	96458,	0.	55690,	0.	87000
3376,	1.	10063,	0.	63545,	0.	87000
3393,	1.	20369,	0.	43861,	0.	36000
3395,	1.	30702,	0.	41889,	0.	36000
3397,	1.	14389,	0.	51601,	0.	36000
3400,	1.	23065,	0.	51235,	0.	36000
3401,	1.	16773,	0.	58797,	0.	36000
3402,	1.	19217,	0.	51468,	0.	53000
3403,	1.	23452,	0.	59975,	0.	36000
3404,	1.	28310,	0.	51079,	0.	53000
3405,	1.	12293,	0.	64832,	0.	36000
3407,	1.	16672,	0.	67361,	0.	36000
3408,	1.	15428,	0.	66642,	0.	53000
3409,	1.	20766,	0.	69724,	0.	53000
3414,	1.	21028,	0.	43498,	0.	70000
3416,	1.	31740,	0.	41006,	0.	70000
3418,	1.	14872,	0.	51467,	0.	70000
3421,	1.	24467,	0.	51399,	0.	70000
3422,	1.	18163,	0.	59378,	0.	70000
3423,	1.	20199,	0.	51569,	0.	87000
3424,	1.	26194,	0.	61051,	0.	70000
3425,	1.	30127,	0.	51133,	0.	87000
3426,	1.	13225,	0.	65370,	0.	70000
3428,	1.	19521,	0.	69005,	0.	70000
3429,	1.	17318,	0.	67734,	0.	87000
3430,	1.	24573,	0.	71922,	0.	87000
3446,	1.	53874,	0.	52239,	0.	36000
3448,	1.	38766,	0.	56619,	0.	36000
3451,	1.	45744,	0.	71867,	0.	36000
3452,	1.	50130,	0.	62186,	0.	53000
3453,	1.	29796,	0.	74937,	0.	36000
3455,	1.	40729,	0.	81250,	0.	53000
3459,	1.	53875,	0.	52237,	0.	70000
3461,	1.	39674,	0.	56645,	0.	70000
3464,	1.	45743,	0.	71869,	0.	70000
3465,	1.	50130,	0.	62186,	0.	87000
3466,	1.	31699,	0.	76037,	0.	70000
3468,	1.	40729,	0.	81250,	0.	87000
3476,	1.	49875,	0.		0.	
3477,	1.	37003,	0.	08234,	0.	
3478,	1.	37250,	0.		0.	09000
3479,	1.	62152,	0.	10634,	0.	
3480,	1.	62500,	0.		0.	09000
3481,	1.	48687,	0.	18812,	0.	
3482,	1.	35043,	0.	24517,	0.	
3483,	1.	36265,	0.	16413,	0.	09000
3484,	1.	59379,	0.	31697,	0.	
3485,	1.	61110,	0.	21211,	0.	09000
3486,	1.	45152,	0.	37291,	0.	

3487,	1.	33341,	0.	32523,	0.	09000
3488,	1.	56963,	0.	42058,	0.	09000
3489,	1.	49875,	0.			0.18000
3490,	1.	37003,	0.	08234,	0.	18000
3491,	1.	37250,	0.			0.27000
3492,	1.	62152,	0.	10634,	0.	18000
3493,	1.	62500,	0.			0.27000
3494,	1.	48687,	0.	18812,	0.	18000
3495,	1.	35043,	0.	24517,	0.	18000
3496,	1.	36265,	0.	16413,	0.	27000
3497,	1.	59379,	0.	31697,	0.	18000
3498,	1.	61110,	0.	21211,	0.	27000
3499,	1.	45152,	0.	37291,	0.	18000
3500,	1.	33341,	0.	32523,	0.	27000
3501,	1.	56963,	0.	42058,	0.	27000
3510,	1.	30702,	0.	41889,	0.	
3512,	1.	53874,	0.	52239,	0.	
3514,	1.	38766,	0.	56619,	0.	
3515,	1.	23452,	0.	59975,	0.	
3516,	1.	27402,	0.	51051,	0.	09000
3517,	1.	45744,	0.	71867,	0.	
3518,	1.	50130,	0.	62186,	0.	09000
3519,	1.	29796,	0.	74937,	0.	
3520,	1.	18862,	0.	68625,	0.	09000
3521,	1.	40729,	0.	81250,	0.	09000
3523,	1.	30702,	0.	41889,	0.	18000
3525,	1.	53874,	0.	52239,	0.	18000
3527,	1.	38766,	0.	56619,	0.	18000
3528,	1.	23452,	0.	59975,	0.	18000
3529,	1.	27402,	0.	51051,	0.	27000
3530,	1.	45744,	0.	71867,	0.	18000
3531,	1.	50130,	0.	62186,	0.	27000
3532,	1.	29796,	0.	74937,	0.	18000
3533,	1.	18862,	0.	68625,	0.	27000
3534,	1.	40729,	0.	81250,	0.	27000

\*NSET, NSET=TOP, GENERATE

61, 79, 9  
 62, 161, 9  
 63, 162, 9  
 142, 160, 9  
 223, 232, 9  
 224, 314, 9  
 225, 315, 9  
 304, 313, 9  
 358, 376, 9  
 359, 431, 9  
 360, 432, 9  
 581, 593, 6  
 725, 737, 6  
 744, 756, 6  
 779, 780, 1  
 785, 786, 1  
 947, 977, 6  
 948, 978, 6  
 1073, 1190, 9  
 1074, 1191, 9  
 1358, 1362, 1  
 1379, 1383, 1  
 1394, 1395, 1  
 1412, 1416, 1  
 1433, 1437, 1  
 1448, 1449, 1



1466, 1470, 1  
1487, 1491, 1  
1502, 1514, 12  
1503, 1529, 13  
1527, 1536, 9  
1553, 1557, 1  
1574, 1578, 1  
1589, 1590, 1  
1907, 1909, 1  
1920, 1922, 1  
1929, 1946, 17  
1948, 1950, 1  
1967, 1971, 1  
2000, 2004, 1  
2021, 2025, 1  
2054, 2058, 1  
2075, 2079, 1  
2102, 2115, 13  
2104, 2117, 13  
2141, 2145, 1  
2162, 2166, 1  
2615, 2617, 1  
2628, 2630, 1  
2641, 2643, 1  
2667, 2671, 1  
2688, 2692, 1  
2709, 2713, 1  
2742, 2746, 1  
2763, 2767, 1  
2784, 2788, 1  
2817, 2821, 1  
2838, 2842, 1  
2859, 2863, 1  
2886, 2912, 13  
2888, 2914, 13  
2938, 2942, 1  
2959, 2963, 1  
2980, 2984, 1  
3258, 3260, 1  
3271, 3273, 1  
3297, 3301, 1  
3318, 3322, 1  
3351, 3355, 1  
3372, 3376, 1  
3405, 3409, 1  
3426, 3430, 1  
3453, 3455, 2  
3466, 3468, 2  
3519, 3521, 1  
3532, 3534, 1  
#NSET, NSET=BOT, GENERATE  
1, 46, 9  
2, 47, 9  
3, 48, 9  
163, 199, 9  
164, 200, 9  
165, 201, 9  
325, 343, 9  
326, 344, 9  
327, 345, 9  
433, 481, 6  
491, 503, 6

541, 553, 6  
542, 554, 6  
613, 625, 6  
635, 647, 6  
685, 715, 6  
686, 716, 6  
757, 763, 6  
758, 764, 6  
799, 805, 6  
800, 806, 6  
827, 833, 6  
828, 834, 6  
895, 901, 6  
896, 902, 6  
920, 926, 6  
995, 1004, 9  
1022, 1040, 9  
1023, 1041, 9  
1201, 1203, 2  
1204, 1208, 2  
1222, 1226, 2  
1227, 1229, 2  
1243, 1245, 2  
1255, 1259, 2  
1268, 1272, 2  
1281, 1288, 7  
1291, 1295, 2  
1309, 1312, 3  
1314, 1316, 2  
1330, 1332, 2  
1591, 1595, 2  
1604, 1608, 2  
1617, 1624, 7  
1627, 1631, 2  
1645, 1748, 3  
1650, 1652, 2  
1688, 1689, 1  
1701, 1803, 102  
1777, 1781, 2  
1790, 1794, 2  
1810, 1814, 4  
1823, 1827, 4  
1843, 1864, 21  
1846, 1850, 2  
1867, 1871, 2  
2179, 2183, 2  
2192, 2196, 2  
2205, 2209, 2  
2225, 2267, 21  
2228, 2232, 2  
2249, 2253, 2  
2270, 2274, 2  
2310, 2336, 13  
2311, 2337, 13  
2438, 2442, 2  
2451, 2455, 2  
2464, 2468, 2  
2484, 2510, 13  
2488, 2514, 13  
2530, 2572, 21  
2533, 2537, 2  
2551, 2572, 21

2554, 2558, 2  
2575, 2579, 2  
2997, 3001, 2  
3010, 3014, 2  
3030, 3051, 21  
3033, 3037, 2  
3054, 3058, 2  
3094, 3095, 2  
3107, 3108, 2  
3284, 3286, 2  
3195, 3199, 2  
3215, 3219, 2  
3228, 3232, 4  
3476, 3480, 2  
3489, 3493, 2  
\*NSET, NSET=BACK, GENERATE  
716, 720, 2  
754, 756, 2  
1022, 1029, 1  
1169, 1173, 1  
2487, 2492, 5  
2530, 2548, 2  
2533, 2541, 8  
2879, 2884, 5  
2926, 2940, 2  
2933, 2939, 6  
\*NSET, NSET=SIDE1, GENERATE  
30, 54, 3  
141, 162, 3  
192, 207, 3  
303, 315, 3  
704, 720, 2  
742, 786, 2  
1023, 1047, 3  
1170, 1191, 3  
1294, 1295, 1  
1302, 1303, 1  
1308, 1315, 7  
1316, 1323, 7  
1324, 1339, 5  
1543, 1551, 8  
1552, 1557, 5  
1564, 1572, 8  
1573, 1588, 5  
1849, 1850, 1  
1857, 1858, 1  
1863, 1884, 21  
1870, 1871, 1  
1878, 1879, 1  
2131, 2145, 14  
2139, 2140, 1  
2152, 2166, 14  
2160, 2161, 1  
2487, 2492, 5  
2536, 2537, 1  
2544, 2545, 1  
2550, 2592, 21  
2557, 2558, 1  
2565, 2566, 1  
2578, 2579, 1  
2586, 2587, 1  
2879, 2884, 5

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 2936, 2937, 1  
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 2970, 2984, 14  
 2978, 2979, 1  
 3218, 3219, 1  
 3223, 3224, 1  
 3227, 3240, 13  
 3231, 3232, 1  
 3236, 3237, 1  
 3446, 3468, 22  
 3451, 3452, 1  
 3455, 3459, 4  
 3464, 3465, 1  
 3479, 3480, 1  
 3484, 3485, 1  
 3488, 3501, 13  
 3492, 3493, 1  
 3497, 3498, 1  
 3512, 3521, 9  
 3517, 3518, 1  
 3525, 3534, 9  
 3530, 3531, 1

\*ELEMENT, TYPE=C3D20R, ELSET= PID1

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	1223, 1203, 1206, 1214, 1211								
33,	2,	3,	6,	5,	11,	12,	15,	14,	1204, 1207, 1212, 1205, 1225, 1228, 1233,
	1226, 1206, 1208, 1216, 1214								
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	1231, 1211, 1214, 1220, 1218								
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	1234, 1214, 1216, 1221, 1220								
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	1244, 1224, 1227, 1235, 1232								
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	1246, 1227, 1229, 1237, 1235								
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	1249, 1232, 1235, 1241, 1239								
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	1251, 1235, 1237, 1242, 1241								
45,	433,	28,	31,	435,	439,	37,	40,	441,	1255, 1258, 1260, 1256, 1268, 1271, 1273,
	1269, 1257, 1259, 1264, 1262								
46,	435,	31,	34,	111,	441,	40,	43,	120,	1260, 1263, 1265, 1261, 1273, 1276, 1278,
	1274, 1262, 1264, 1267, 1266								
17,	439,	37,	40,	441,	445,	46,	49,	447,	1268, 1271, 1273, 1269, 1281, 1283, 1284,
	1282, 1270, 1272, 1277, 1275								
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	1285, 1275, 1277, 1280, 1279								
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	1271, 1259, 1293, 1301, 1264								
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	1276, 1264, 1301, 1307, 1267								
54,	32,	33,	36,	35,	41,	42,	45,	44,	1299, 1302, 1306, 1300, 1320, 1323, 1327,
	1321, 1301, 1303, 1308, 1307								
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32, 58, 59, 62, 61, 67,	68, 71, 70, 1350, 1354, 1358, 1351, 1371, 1375, 1379,		
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1369, 1221, 1401, 1409, 1357			
39, 83, 84, 87, 86, 92,	93, 96, 95, 1399, 1402, 1407, 1400, 1420, 1423, 1428,		
1421, 1401, 1403, 1411, 1409			
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1441, 1422, 1424, 1432, 1430			
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43, 110, 111, 114, 113, 119,	120, 123, 122, 1453, 1456, 1461, 1454, 1474, 1477, 1482,		
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44, 113, 114, 117, 116, 122,	123, 126, 25, 1461, 1464, 1468, 1462, 1482, 1485, 1489,		
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 57, 475, 172, 175, 477, 481, 1, 4, 483, 1604, 1607, 1609, 1605, 1617, 1202, 1620,  
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\*ELSET, ELSET=FSUR1, GENERATE

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1, 28, 1
*ELSET, ELSET=HOL13, GENERATE
9, 15, 2
37, 43, 2
*ELSET, ELSET=HOL14, GENERATE
5, 6, 1
33, 34, 1
*ELSET, ELSET=HOL16, GENERATE
1, 4, 1
17, 18, 1
29, 32, 1
45, 46, 1
*ELSET, ELSET=FSUR2, GENERATE
57, 60, 1
69, 71, 1
74, 80, 3
83, 84, 1
*ELSET, ELSET=HOL2, GENERATE
57, 60, 1
69, 71, 1
74, 80, 3
83, 84, 1
97, 100, 1
109, 111, 1
114, 120, 3
123, 124, 1
*ELSET, ELSET=HOL3, GENERATE
137, 140, 1
149, 151, 1
154, 160, 3
163, 164, 1
*ELSET, ELSET=HOL4, GENERATE
177, 180, 1
189, 191, 1
194, 200, 3
203, 204, 1
*ELSET, ELSET=HOL5, GENERATE
217, 220, 1
229, 231, 1
234, 240, 3
243, 244, 1
*ELSET, ELSET=HOL6, GENERATE
257, 260, 1
269, 171, 1
274, 280, 3
283, 284, 1
*ELSET, ELSET=HOL7, GENERATE
289, 292, 1
301, 303, 1
306, 312, 3
315, 316, 1
*ELSET, ELSET=RSUR1, GENERATE
289, 320, 1
*ELSET, ELSET=FLNG1, GENERATE
321, 324, 1
*ELSET, ELSET=FLNG2, GENERATE
325, 328, 1
*ELSET, ELSET=RSUR2, GENERATE
325, 328, 1
*TRANSFORM, NSET=TOP, TYPE=C
0 0, 0, 0, -1 0, 0, 0, 0, 3, 0
*TRANSFORM, NSET=SIDE1, TYPE=C

```

```

0.0,0.0,-1 0.0,0.0,0.3,0
*INITIAL CONDITIONS, TYPE=TEMPERATURE
NALL, 70.
*BOUNDARY
SIDE1, 1
TOP, 2
BOT, 2
BACK, 3
*RESTART, WRITE
*MATERIAL
*ELASTIC
15000000. 0.0, 33, 70.0
13400000. 0.0, 33, 392.0
12900000. 0.0, 33, 752.0
12400000. 0.0, 33, 1112.0
11900000. 0.0, 33, 1472.0
11500000. 0.0, 33, 1832.0
11000000. 0.0, 33, 2192.0
10500000. 0.0, 33, 2552.0
9000000. 0.0, 33, 2912.0
*PLASTIC
40000. 0.0, 0, 70.0
50000. 0.0, 0.0066, 70.0
21000. 0.0, 0, 1832.0
26000. 0.0, 0.0045, 1832.0
*EXPANSION, ZERO=70.0
C. 0, 70.0
0.000035, 500.0
0.000038, 1000.0
0.000041, 1500.0
0.000042, 2000.0
0.000044, 2500.0
0.000046, 3000.0
0.000048, 3500.0
*CONDUCTIVITY
0.000601, 0.0
0.000648, 500.0
0.000717, 1000.0
0.000741, 1500.0
0.000810, 2000.0
0.000879, 2500.0
0.000926, 3000.0
*DENSITY
0.31
*SPECIFIC HEAT
0.075, 1000.0
*STEP, LINEAR
STRESS ANALYSIS --- PRESSURE LOAD ONLY
*STATIC
*FIELD, FILE=16, BSTEP=1( INC=10), ESTEP=1( INC=10)
*DLOAD
FSUR1, P2, 22000.0
HOL13, P3, 21500.0
HOL14, P4, 21500.0
HOL16, P6, 21500.0
FSUR2, P2, 21500.0
HOL2, P6, 21500.0
HOL3, P6, 21000.0
HOL4, P6, 21000.0
HOL5, P6, 21000.0
HOL6, P6, 20500.0
HOL7, P6, 20500.0

```



```

RSUR1,P1,20000.0
FLNG1,P6,20500.0
FLNG2,P6,20000.0
RSUR2,P1,20000.0
*NODE PRINT
1.1.1.1.1.1.1.1
*EL PRINT
1.1.1.1.1.1
1.1.1.1.1
1.1.1.1.1.1.1
*NODE FILE,NSET=NALL
2.1.1.1.1.1.1.1
*END STEP
*STEP,LINEAR=OLD
STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD
*STATIC
*TEMPERATURE,FILE=15,BSTEP=1(INC=10),ESTEP=1(INC=10)
*NODE PRINT
1.1.1.1.1.1.1.1
*EL PRINT
1.1.1.1.1.1
1.1.1.1.1
1.1.1.1.1.1.1
*NODE FILE,NSET=NALL
2.1.1.1.1.1.1.1
*END STEP

```

\*HEADING  
MACH 14 FLOW RESTRICTOR  
THERMAL STRESS ANALYSIS M14FRO31  
POST OUTPUT OF ELEMENT VALUES TO NODAL POINTS --- PRESSURE ONLY !!!!!  
\*POST OUTPUT STEP=1  
1  
\*NODE PRINT  
1, 1, 1, 1, 1, 1, 1, 1  
\*EL PRINT  
1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1  
1, 1, 1, 1, 1, 1, 1, 1  
\*EL FILE  
1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1  
2, 2, 1, 2, 2, 2, 2, 2

\*HEADING  
MACH 14 FLOW RESTRICTOR  
THERMAL STRESS ANALYSIS M14FRO31  
POST OUTPUT OF ELEMENT VALUES TO NODAL POINTS --- PRESSURE AND TEMPERATURE  
\*POST OUTPUT, STEP=2  
1  
\*NODE PRINT  
1, 1, 1, 1, 1, 1, 1, 1  
\*EL PRINT  
1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1  
1, 1, 1, 1, 1, 1, 1, 1  
\*EL FILE  
1, 1, 1, 1, 1, 1  
1, 1, 1, 1, 1  
2, 2, 1, 2, 2, 2, 2, 2

APPENDIX J

ABAQUS THERMAL STRESS ANALYSIS RESULTS

ABAQUS VERSION 4-4-72  
 MACH 14 FLOW RESTRICTOR  
 STRESS ANALYSIS ---- PRESSURE LOAD ONLY

DATE 15-MAY-84  
 TIME 10:37:29  
 STEP 1 INCREMENT 1

STEP 1 STRESS ANALYSIS ---- PRESSURE LOAD ONLY

# STATIC ANALYSIS

USER SPECIFIED INCREMENTS OF 1.00 FOR A TIME PERIOD OF 1.00

SHALL DISPLACEMENT THEORY WILL BE USED

MAXIMUM NUMBER OF INCREMENTS ALLOWED IN THIS STEP IS 10

MAXIMUM NUMBER OF ITERATIONS ALLOWED PER INCREMENT IS 1

PRINT OF INCREMENT NUMBER, TIME, ETC., EVERY 1 INCREMENTS

INCREMENT NUMBER 1 ATTEMPT NUMBER 1  
 TIME INCREMENT = 1.00

TIME COMPLETED DURING THIS STEP 1.00 , TIME INCREMENT COMPLETED IS 1.00 , FRACTION OF STEP IS 1.00  
 TOTAL ACCUMULATED TIME IS 1.00

RESTART INFORMATION WRITTEN IN STEP 1 AFTER INCREMENT 1

ABRAGUS VERSION 4-4-72

TIME 10:37:29

DATE 15-MAY-84

PAGE 2

MACH 14 FLOW RESTRICTOR  
STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD

STEP 2 INCREMENT 1

STEP 2 STRESS ANALYSIS --- PRESSURE AND TEMPERATURE LOAD

## S T A T I C   A N A L Y S I S

USER SPECIFIED INCREMENTS OF 1.00 FOR A TIME PERIOD OF 1.00

SMALL DISPLACEMENT THEORY WILL BE USED

MAXIMUM NUMBER OF INCREMENTS ALLOWED IN THIS STEP IS 10

MAXIMUM NUMBER OF ITERATIONS ALLOWED PER INCREMENT IS 1

PRINT OF INCREMENT NUMBER, TIME, ETC., EVERY 1 INCREMENTS

INCREMENT NUMBER 1 ATTEMPT NUMBER 1  
TIME INCREMENT = 1.00TIME COMPLETED DURING THIS STEP 1.00 , TIME INCREMENT COMPLETED IS 1.00 , FRACTION OF STEP IS 1.00  
TOTAL ACCUMULATED TIME IS 2.00

RESTART INFORMATION WRITTEN IN STEP 2 AFTER INCREMENT 1

THE ANALYSIS HAS BEEN COMPLETED

END OF RUN

ABAGUS VERSION 4-4-75  
MACH 14 FLOW RESTRICTOR

DATE 20-AUG-84

TIME 12:34:02

PAGE 1

STEP 0 INCREMENT 0

STEP NUMBER 2 INCREMENT NUMBER 1

## ELEMENT OUTPUT FOR ALL ELEMENTS

## STRESSES

NODE POINT	11	22	33	12	13	23
1	-1.759E+05	-2.188E+05	-1.823E+05	267.	-3.539E+04	-1.304E+03
2	-1.743E+04	-1.411E+04	1.931E+04	-2.693E+03	-5.539E+03	1.857E+03
3	-1.654E+05	-1.940E+05	-1.804E+05	-4.293E+04	2.875E+04	-523.
4	-1.737E+05	-2.295E+05	-1.857E+05	-1.921E+03	-3.708E+04	-979.
5	-1.847E+04	9.050E+03	4.274E+04	1.936E+04	837.	2.827E+03
6	-1.836E+05	-2.012E+05	-1.892E+05	-3.109E+04	2.531E+04	-2.348E+04
7	-1.695E+05	-2.131E+05	-1.788E+05	-843.	-3.238E+04	6.032E+03
8	-4.017E+04	4.984E+03	5.213E+04	1.770E+04	-662.	-9.131E+03
9	-2.130E+05	-1.895E+05	-2.003E+05	-2.241E+04	1.090E+04	-3.251E+04
10	-1.192E+05	-2.102E+05	-1.792E+05	-2.893E+04	4.154E+03	-72.6
11	-1.950E+04	8.427E+04	5.628E+04	-1.559E+04	-837.	527.
12	-3.545E+04	-2.040E+05	-1.531E+05	5.805E+04	-4.099E+03	-203.
13	-1.013E+05	-2.158E+05	-1.729E+05	-2.695E+04	4.648E+03	-590.
14	-2.901E+04	3.757E+04	3.883E+04	-1.385E+04	-1.666E+03	-2.263E+03
15	-1.491E+05	-1.669E+05	-1.960E+05	-2.638E+04	-6.278E+03	-583.
16	-7.999E+04	-1.968E+05	-1.535E+05	-6.480E+03	3.428E+03	-436.
17	-1.605E+04	3.847E+04	4.238E+04	1.273E+04	-2.356E+03	-4.557E+03
18	-1.975E+05	-1.520E+05	-2.083E+05	-4.665E+04	-8.026E+03	2.882E+03
19	-1.415E+05	-2.075E+05	-1.361E+05	1.586E+03	-6.468E+03	2.761E+03
20	-1.170E+05	-1.460E+05	-6.394E+04	316.	5.064E+03	-2.279E+03
21	-1.392E+05	-2.256E+05	-1.394E+05	-2.564E+03	1.548E+03	-5.489E+03
22	-1.316E+05	-2.223E+05	-1.334E+05	2.663E+03	-6.503E+03	-6.417E+03
23	-1.145E+05	-1.199E+05	-6.496E+04	3.229E+03	4.136E+03	7.088E+03
24	-1.531E+05	-1.976E+05	-1.278E+05	-4.531E+04	3.696E+03	-1.005E+03
25	-1.340E+05	-2.091E+05	-1.261E+05	39.7	-1.165E+04	-383.
26	-1.185E+05	-1.228E+05	-6.738E+04	-3.276E+03	3.475E+03	-6.768E+03
27	-2.061E+05	-1.601E+05	-1.464E+05	-4.028E+04	5.537E+03	-564.
28	-5.887E+04	4.776E+03	-6.468E+03	440.	-750.	-49.2

DATE 20-AUG-84  
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PAGE 2  
STEP 2 INCREMENT 1

ABAGUS VERSION 4-4-75

## MACH 14 FLOW RESTRICTOR

29	1	-2.278E+04	-9.140E+03	-1.448E+04	-129.	-3.435E+03	14.8
30	1	-1.851E+04	-1.272E+04	-1.911E+04	109.	219	-26.7
31	1	-5.439E+04	1.006E+04	2.408E+03	-1.329E+04	1.042E+03	2.227E+03
32	1	-2.278E+04	-1.106E+04	-1.601E+04	-68.6	-3.898E+03	-927.
33	1	-1.886E+04	-1.206E+04	-1.900E+04	451.	-52.6	-79.4
34	1	-2.490E+04	1.501E+04	2.316E+04	-2.187E+04	1.138E+03	3.278E+03
35	1	-2.194E+04	-9.062E+03	-1.603E+04	-452.	-3.382E+03	-671.
36	1	-1.870E+04	-1.336E+04	-1.956E+04	-137.	-200.	-82.6
37	1	-1.634E+04	1.359E+04	-559	888.	-2.048E+04	247.
38	1	-5.510E+03	6.279E+03	-1.564E+04	-123.	-5.235E+03	25.2
39	1	-6.416E+03	1.731E+03	-1.608E+04	66.2	107.	-93.2
40	1	-1.630E+04	2.285E+04	7.376E+03	-6.193E+03	-2.198E+04	-4.444E+03
41	1	-5.807E+03	3.924E+03	-1.689E+04	317.	-4.402E+03	-302.
42	1	-6.917E+03	2.561E+03	-1.592E+04	280.	289	-178.
43	1	5.432E+03	3.795E+04	3.022E+04	-1.495E+04	-2.169E+04	-7.270E+03
44	1	-6.446E+03	6.188E+03	-1.615E+04	366.	-3.286E+03	-139.
45	1	-7.041E+03	1.191E+03	-1.634E+04	-168.	459	-345.
46	1	-1.300E+05	-1.362E+05	-6.034E+04	1.345E+03	-1.321E+04	51.8
47	1	-1.538E+05	-1.350E+05	-5.694E+04	-135.	2.001E+03	-46.5
48	1	-1.519E+05	-1.420E+05	-5.934E+04	-31.8	459	76.7
49	1	-1.372E+05	-1.302E+05	-5.879E+04	5.127E+03	-1.187E+04	-2.610E+03
50	1	-1.541E+05	-1.349E+05	-5.756E+04	-662.	1.752E+03	158.
51	1	-1.523E+05	-1.419E+05	-5.966E+04	-38.9	210	131.
52	1	-1.422E+05	-1.261E+05	-5.442E+04	-47.9	-5.236E+03	-2.348E+03
53	1	-1.548E+05	-1.392E+05	-5.904E+04	-518.	702.	109.
54	1	-1.523E+05	-1.420E+05	-5.946E+04	-152.	-5.40	192.
55	1	-1.708E+05	-2.219E+05	-1.797E+05	-920.	-3.262E+04	-158.
56	1	-3.283E+04	-767	5.108E+04	1.220E+04	-857	1.695E+03
57	1	-6.195E+04	-8.898E+04	-4.711E+04	5.506E+03	-5.630E+03	-7.066E+03
58	1	-1.694E+05	-2.128E+05	-1.745E+05	-1.340E+03	-3.042E+04	-323.
59	1	-1.876E+04	-2.272E+03	5.637E+04	1.262E+03	-3.300E+03	312.
60	1	-1.516E+04	-7.976E+04	-1.010E+04	2.238E+03	-8.475E+03	995.
61	1	-9.522E+04	-2.004E+05	-1.607E+05	-6.848E+03	2.212E+03	-609.
62	1	-1.706E+03	4.048E+04	5.358E+04	7.923E+03	-2.895E+03	-2.900E+03
63	1	-7.221E+04	-5.532E+04	-6.380E+04	-1.814E+03	7.844E+03	505.
64	1	-1.051E+05	-1.962E+05	-1.615E+05	-1.551E+03	1.080E+03	-157.
65	1	-8.871E+03	-3.702E+04	-4.473E+03	3.033E+03	-1.023E+04	-62.5
66	1	-1.358E+05	-2.139E+05	-1.305E+05	-453.	-1.122E+04	-282.
67	1	-1.244E+05	-1.144E+05	-5.853E+04	-3.285E+03	443.	-3.181E+03
68	1	-1.591E+05	-1.192E+05	-9.294E+04	-6.573E+03	5.439E+03	-1.530E+04
69	1	-1.402E+05	-2.134E+05	-1.289E+05	45.1	-1.238E+04	-335.
70	1	-1.280E+05	-1.118E+05	-6.113E+04	-474.	819	-275.
71	1	-1.333E+05	-1.144E+05	-6.721E+04	2.003E+03	877.	-665.
72	1	-2.322E+05	-1.898E+05	-2.117E+05	-978.	-5.550E+03	-4.028E+04
73	1	-2.312E+05	-1.935E+05	-2.160E+05	1.592E+04	-1.421E+04	-3.519E+04



DATE 20-AUG-84  
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 PAGE 3  
 STEP 2 INCREMENT 1

ABAQUS VERSION 4.4-75

MACH 14 FLOW RESTRICTOR

86	1	-4	280E+04	-8	958E+04	-3	560E+04	8	649E+03	-6	646E+03	-4	738E+03		
87	1	-2	130E+04	-7	054E+04	-1	489E+04	-3	906E+03	-5	843E+03	1	280E+03		
89	1	-3	723E+03	-7	081E+04	-1	741E+03	-600	-5	345E+03	1	009E+03			
90	1	858	-4	114E+04	1	601E+04	-2	581E+03	262	-1	872E+03	6	264E+03		
92	1	-2	354E+05	-1	181E+05	-2	069E+05	-3	989E+03	-1	237E+04	1	045E+04		
93	1	-2	342E+05	-1	315E+05	-2	134E+05	4	070E+04	-1	214E+04	1	076E+03		
95	1	-3	482E+04	-5	423E+04	-4	678E+04	1	239E+04	-1	308E+04	-2	616E+03		
96	1	-1	919E+04	-3	998E+04	-1	878E+04	6	144E+03	-1	722E+04	-590	-868		
98	1	4	807E+03	-3	671E+04	4	781E+03	-794	-1	672E+04	-2	295E+04	4	973E+03	
99	1	2	369E+04	-4	561E+03	3	192E+04	-1	383E+03	-2	792E+03	11	8		
101	1	-2	317E+05	-1	347E+05	-1	380E+05	-3	792E+03	-1	651E+03	1	608E+03		
102	1	-2	293E+05	-1	455E+05	-1	356E+05	3	294E+04	-4	174E+03	-1	677E+04		
104	1	-1	545E+05	-1	238E+05	-9	226E+04	8	701E+03	-4	101E+04	-1	736E+04		
105	1	-1	421E+05	-1	304E+05	-7	875E+04	1	072E+04	-1	011E+04	-1	361E+03		
107	1	-1	277E+05	-1	232E+05	-6	006E+04	295	-3	906E+03	598	-3	185E+04		
108	1	-1	333E+05	-1	316E+05	-5	584E+04	-204	-2	817E+04	-3	172E+04	-1	536E+04	
110	1	-2	238E+05	-1	920E+05	-2	160E+05	2	014E+04	-3	172E+04	-1	536E+04		
111	1	-1	865E+05	-1	965E+05	-2	092E+05	-2	156E+04	-623	7	071E+03	6	033E+03	
113	1	-1	182E+04	-3	824E+03	1	746E+04	-2	308E+04	1	319E+03	1	194E+03	1	194E+03
114	1	-1	960E+04	-6	248E+03	1	746E+04	-2	308E+04	1	319E+03	1	194E+03	1	194E+03
116	1	-2	272E+04	-2	504E+04	4	009E+03	-1	096E+03	-1	865E+03	1	194E+03	1	194E+03
117	1	-1	363E+04	-1	614E+04	1	538E+03	2	204E+03	-4	282E+03	1	247E+04	1	247E+04
119	1	-1	952E+05	-1	537E+05	-2	082E+05	6	654E+04	-5	753E+03	1	013E+03	1	013E+03
120	1	-1	385E+05	-1	764E+05	-1	914E+05	4	834E+04	-3	908E+03	-6	954E+03	-8	503E+03
122	1	3	011E+03	-1	151E+04	9	049E+03	-1	170E+04	-2	103E+04	-1	727E+03	-343	1
123	1	518	1	829E+04	2	240E+04	2	240E+04	-1	509E+04	-2	264E+04	-1	818E+03	1
125	1	4	229E+03	8	984E+03	1	499E+04	2	576E+03	5	463E+04	-873	1	818E+03	1
126	1	1	035E+04	9	422E+03	2	145E+05	5	463E+04	-1	032E+04	-5	823E+03	-1	434E+04
128	1	-2	024E+05	-1	690E+05	-1	335E+05	5	463E+04	-1	032E+04	-5	823E+03	-1	434E+04
129	1	-1	684E+05	-1	940E+05	-1	297E+05	4	281E+04	-1	172E+04	-1	434E+04	-1	434E+04
131	1	-1	418E+05	-1	332E+05	-6	927E+04	5	302E+03	-1	172E+04	-1	434E+04	-1	434E+04
132	1	-1	458E+05	-1	285E+05	-6	140E+04	3	997E+03	-7	591E+03	-6	585E+03	-6	585E+03
134	1	-1	398E+05	-1	303E+05	-5	500E+04	-1	274E+03	1	494E+03	1	947E+03	1	947E+03
135	1	-1	474E+05	-1	359E+05	-5	846E+04	-1	842E+03	2	122E+03	1	378E+03	1	378E+03
139	1	-2	440E+04	-1	324E+04	-4	891E+03	8	894E+03	-4	182E+03	968	-287	-287	-287
140	1	-2	110E+04	-1	094E+04	-1	697E+04	-352	-3	308E+03	-3	308E+03	-169	-169	-169
141	1	-1	863E+04	-1	275E+04	-1	935E+04	381	-108	-4	657E+03	0	848	0	848
142	1	-3	014E+04	-1	595E+04	-7	035E+03	-3	22	-4	657E+03	0	848	0	848
143	1	-2	139E+04	-1	121E+04	-1	741E+04	20	0	-3	119E+03	-27	5	-27	5
144	1	-1	860E+04	-1	277E+04	-1	963E+04	57	7	-96	8	-25	4	-25	4
148	1	-641	9	412E+03	-3	522E+03	-6	115E+03	-1	513E+04	-4	045E+03	-357	-357	-357
149	1	-7	272E+03	4	364E+03	-1	642E+04	272	266	-2	452E+03	-102	-102	-102	-102
150	1	-7	164E+03	1	793E+03	-1	631E+04	266	-209	-1	317E+04	-86	9	-86	9
151	1	-9	199E+03	6	240E+03	-8	815E+03	-209	45	8	-2	322E+03	32	8	32
152	1	-8	283E+03	3	971E+03	-1	654E+04	45	8	-2	322E+03	32	8	32	8
153	1	-7	300E+03	1	832E+03	-1	639E+04	23	7	350	-11	5	-11	5	-11

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MACH 14 FLOW RESTRICTOR

157	-1.499E+05	-1.336E+05	-5.879E+04	-437	1.200E+03	-650
158	-1.552E+05	-1.396E+05	-5.932E+04	-164	387	29.1
159	-1.524E+05	-1.425E+05	-5.945E+04	55.0	-79.1	138
160	-1.543E+05	-1.370E+05	-6.141E+04	-719	-198	189
161	-1.552E+05	-1.398E+05	-5.922E+04	-17.5	323	11.1
162	-1.528E+05	-1.424E+05	-5.936E+04	12.4	-153	67.1
163	-1.573E+04	-5.791E+04	-5.525E+04	-375	-1.030E+04	98.9
164	-3.818E+04	1.549E+04	1.562E+04	793	-3.122E+03	37.6
165	-5.760E+04	-6.340E+04	-5.997E+04	-942	1.145E+04	-23.2
166	-5.904E+04	-5.716E+04	-5.292E+04	99.6	-1.029E+04	196
167	-3.261E+04	1.463E+04	1.369E+04	1.025E+04	-2.502E+03	1.646E+03
168	-5.760E+04	-6.171E+04	-5.559E+04	-3.184E+03	1.079E+04	-9.443E+03
169	-5.694E+04	-5.427E+04	-5.229E+04	325	-9.916E+03	-1.427E+03
170	-2.224E+04	1.282E+03	2.189E+04	1.413E+04	-674	4.959E+03
171	-6.280E+04	-5.172E+04	-5.715E+04	-3.820E+03	2.329E+03	-8.202E+03
172	-6.678E+04	-9.603E+04	-8.595E+04	465	-1.549E+04	1.032E+03
173	-5.720E+04	4.435E+03	2.085E+04	-442	-1.910E+03	-2.441E+03
174	-7.154E+04	-1.097E+05	-9.571E+04	4.914E+03	1.051E+04	-2.193E+03
175	-6.437E+04	-8.905E+04	-8.261E+04	2.045E+03	-1.396E+04	2.011E+03
176	-5.824E+04	-2.644E+04	1.864E+04	5.437E+03	-2.313E+03	2.094E+03
177	-6.588E+04	-8.831E+04	-7.294E+04	1.733E+04	1.493E+04	-1.163E+04
178	-6.442E+04	-9.830E+04	-7.907E+04	-220	-1.241E+04	-1.520E+03
179	-3.779E+04	2.028E+04	2.853E+04	1.594E+04	-1.253E+03	1.125E+04
180	-9.342E+04	-8.649E+04	-9.667E+04	-2.079E+04	3.448E+03	-2.075E+04
190	-3.422E+04	1.143E+04	-1.087E+04	166	3.086E+03	31.2
191	-2.298E+04	-9.041E+03	-1.358E+04	-173	-1.857E+03	0.682
192	-1.810E+04	-1.216E+04	-1.864E+04	85.9	141	-8.26
193	-3.339E+04	9.879E+03	-8.478E+03	-7.942E+03	3.357E+03	2.302E+03
194	-2.284E+04	-9.424E+03	-1.411E+04	-402	-2.070E+03	-159
195	-1.841E+04	-1.214E+04	-1.879E+04	262	27.2	-80.5
196	-2.293E+04	1.309E+03	-4.910E+03	-1.377E+04	2.878E+03	2.652E+03
197	-2.160E+04	-9.337E+03	-1.441E+04	-975	-2.024E+03	-181
198	-1.819E+04	-1.262E+04	-1.907E+04	-167	8.95	-137
199	-4.567E+04	4.988E+03	-1.247E+04	-8.77	1.010E+04	-153
200	-2.233E+04	-8.996E+03	-1.391E+04	-133	-3.313E+03	45.9
201	-1.829E+04	-1.233E+04	-1.864E+04	105	-255	-43.3
202	-1.408E+04	8.702E+03	-4.241E+03	-1.042E+04	9.517E+03	4.143E+03
203	-2.229E+04	-1.002E+04	-1.486E+04	-216	-3.285E+03	-443
204	-1.871E+04	-1.215E+04	-1.871E+04	275	305	-101
205	-2.725E+04	4.754E+03	5.095E+03	-1.577E+04	5.937E+03	4.591E+03
206	-2.157E+04	-9.534E+03	-1.564E+04	-597	-2.711E+03	-589
207	-1.848E+04	-1.277E+04	-1.894E+04	159	159	-71.6
220	-5.693E+04	-5.615E+04	-5.311E+04	753	-8.690E+03	774
221	-1.747E+04	-4.958E+03	2.528E+04	9.142E+03	-1.425E+03	-339
222	-3.685E+03	-3.976E+04	-1.684E+04	5.541E+03	-5.024E+03	-7.882E+03
223	-5.409E+04	-5.201E+04	-4.937E+04	-65.8	-8.862E+03	-84.8

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224	1	-1.328E+04	-1.261E+04	2.215E+04	718	-1.575E+03	8.14
225	1	-1.466E+04	-3.290E+04	-4.035E+03	-5.03	-5.286E+03	414
229	1	-6.229E+04	-8.983E+04	-7.728E+04	899	-1.083E+04	139
230	1	-2.302E+04	456	3.541E+04	1.022E+04	-979	2.651E+03
231	1	-2.751E+04	-5.453E+04	-4.063E+04	2.938E+03	-9.770E+03	4.724E+03
232	1	-6.154E+04	-8.816E+04	-7.597E+04	36.7	-1.007E+04	596
233	1	-1.800E+04	-8.249E+03	3.673E+04	697	-2.454E+03	-451
234	1	-6.578E+03	-5.225E+04	-1.455E+03	1.008E+03	-6.185E+03	901
243	1	-6.332E+04	-5.816E+04	-6.179E+04	-1.255E+04	-8.716E+03	-2.371E+04
246	1	-1.004E+03	-5.426E+04	-7.272E+04	2.315E+04	-4.750E+03	-7.693E+03
248	1	1.004E+03	-1.812E+04	-2.332E+04	2.324E+03	-5.636E+03	-5.960E+03
249	1	9.628E+03	-2.150E+04	-1.373E+04	281	-1.044E+03	1.260E+03
251	1	1.216E+04	-2.449E+04	-3.950E+03	579	-1.072E+03	1.875E+03
252	1	-331	-2.231E+04	-1.741E+03	-2.353E+03	600	582
254	1	-7.969E+04	-7.684E+04	-1.022E+05	1.216E+04	4.373E+03	-8.572E+03
255	1	-8.684E+04	-6.484E+04	-9.578E+04	7.819E+03	-8.522E+03	-1.611E+04
257	1	-2.278E+04	-5.123E+04	-3.174E+04	8.308E+03	-4.597E+03	1.700E+04
258	1	-5.235E+03	-4.261E+04	-1.452E+04	-2.791E+03	5.847E+03	1.615E+04
260	1	1.344E+04	-4.248E+04	6.484E+03	-2.131E+03	552	848
261	1	-966	-2.914E+04	5.516E+03	-509	1.969E+03	1.631E+03
272	1	-5.929E+04	-2.758E+04	-7.247E+04	1.162E+04	-8.113E+03	-6.106E+03
273	1	-4.546E+04	-7.160E+04	-7.614E+04	1.781E+04	-1.100E+04	-3.330E+03
275	1	-842	-1.729E+04	-1.023E+04	8.988E+03	717	2.775E+03
276	1	-1.474E+04	-2.932E+03	-8.248E+03	-1.101E+04	2.244E+03	3.592E+03
279	1	-1.401E+04	-1.913E+04	-3.629E+03	1.716E+03	559	-337
279	1	-1.628E+04	-1.349E+04	-1.999E+03	-2.159E+03	-874	-17.5
281	1	-8.723E+04	-7.034E+04	-1.036E+05	1.977E+04	-1.410E+04	-1.150E+04
282	1	-6.906E+04	-7.427E+04	-1.028E+05	1.374E+04	-1.195E+04	-2.337E+03
284	1	-8.044E+03	-2.320E+04	-2.635E+03	1.587E+04	8.224E+03	1.595E+04
285	1	-1.640E+04	-7.012E+03	6.819E+03	-1.438E+04	9.170E+03	9.568E+03
287	1	-1.610E+04	-1.892E+04	389	556	-339	686
288	1	-1.591E+04	-1.586E+04	-3.948E+03	1.340E+03	-4.181E+03	1.035E+03
301	1	-2.240E+04	-1.150E+04	-8.112E+03	-6.199E+03	-1.492E+03	1.620E+03
302	1	-2.077E+04	-1.083E+04	-1.584E+04	-455	-2.010E+03	-163
303	1	-1.779E+04	-1.223E+04	-1.865E+04	157	178	-91.0
304	1	-2.128E+04	-1.277E+04	-8.317E+03	64.9	-1.933E+03	94.2
305	1	-2.068E+04	-1.067E+04	-1.595E+04	-128	-1.989E+03	-20.0
306	1	-1.783E+04	-1.256E+04	-1.895E+04	36.8	65.3	-13.2
310	1	-2.253E+04	-1.211E+04	-6.740E+03	-7.675E+03	-3.396E+03	1.572E+03
311	1	-2.103E+04	-1.062E+04	-1.613E+04	-374	-2.665E+03	-172
312	1	-1.861E+04	-1.275E+04	-1.929E+04	185	-131	-195
313	1	-2.595E+04	-1.435E+04	-8.216E+03	-182	-2.002E+03	-553
314	1	-2.116E+04	-1.103E+04	-1.668E+04	-14.5	-2.564E+03	89.8
315	1	-1.846E+04	-1.270E+04	-1.927E+04	28.7	319	-88.9
325	1	-1.327E+05	-1.491E+05	-7.049E+04	1.156E+03	1.534E+04	197
326	1	-1.551E+05	-1.189E+05	-5.651E+04	-2.233E+03	-2.082E+03	-1.512E+03

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MACH 14 FLOW RESTRICTOR

327	1	-1.573E+05	-1.982E+05	-7.808E+04	-9.778E+03	-1.440E+04	5.607E+03
328	1	-1.329E+05	-1.436E+05	-6.846E+04	2.418E+03	1.516E+04	-439
329	1	-1.385E+05	-1.434E+05	-5.777E+04	2.240E+03	-1.748E+03	3.463E+03
330	1	-1.294E+05	-1.147E+05	-6.759E+04	-3.412E+04	-9.657E+03	8.831E+03
331	1	-1.282E+05	-1.436E+05	-6.593E+04	4.336E+03	1.512E+04	-152
332	1	-1.378E+05	-1.349E+05	-5.750E+04	4.736E+03	-2.692E+03	3.996E+03
333	1	-1.336E+05	-1.101E+05	-7.182E+04	-2.198E+03	-8.409E+03	1.586E+04
334	1	-4.759E+04	-4.429E+04	-2.949E+04	1.620E+03	1.247E+04	-181
335	1	-3.536E+04	4.047E+04	3.230E+04	-2.806E+03	5.305E+03	505
336	1	-8.181E+04	-1.059E+05	-6.903E+04	-5.640E+03	-2.635E+03	-1.074E+03
337	1	-4.800E+04	-3.768E+04	-2.706E+04	344	1.264E+04	367
338	1	-1.333E+04	9.715E+03	2.798E+04	1.938E+04	3.983E+03	1.476E+03
339	1	-2.719E+04	-1.077E+04	-1.962E+04	-2.864E+04	-3.173E+03	4.253E+03
340	1	-4.289E+04	-3.308E+04	-2.293E+04	2.221E+03	1.299E+04	308
341	1	4.211E+03	1.634E+04	3.129E+04	5.072E+03	1.417E+03	4.172E+03
342	1	-5.004E+04	-1.436E+04	-3.113E+04	4.284E+03	1.291E+03	7.206E+03
343	1	-6.267E+04	-5.033E+04	-4.534E+04	734	939	-145
344	1	-5.379E+04	2.156E+04	2.521E+04	-1.177E+03	4.204E+03	308
345	1	-7.261E+04	-7.476E+04	-5.818E+04	-3.398E+03	5.771E+03	-3.465E+03
346	1	-6.270E+04	-4.703E+04	-4.362E+04	-288	1.083E+03	-246
347	1	-4.187E+04	1.196E+03	2.486E+04	1.689E+04	1.707E+03	-2.610E+03
348	1	-4.927E+04	-3.771E+04	-3.933E+04	-1.198E+04	-7.976E+03	8.538E+03
349	1	-5.984E+04	-4.245E+04	-3.895E+04	677	648	-414
350	1	-2.550E+04	-3.078E+03	2.751E+04	1.291E+04	-944	-189
351	1	-5.532E+04	-4.371E+04	-4.723E+04	3.066E+03	5.562E+03	9.796E+03
355	1	-1.269E+05	-1.491E+05	-6.695E+04	2.768E+03	1.485E+04	-37.8
356	1	-1.421E+05	-1.289E+05	-5.740E+04	-3.138E+03	-1.251E+03	2.168E+03
357	1	-1.424E+05	-1.243E+05	-6.294E+04	2.371E+03	-3.174E+03	9.070E+03
358	1	-1.259E+05	-1.493E+05	-6.621E+04	60.6	1.477E+04	53.7
359	1	-1.434E+05	-1.266E+05	-5.717E+04	0.359	-1.269E+03	-11.8
360	1	-1.374E+05	-1.315E+05	-6.127E+04	580	-848	-100
364	1	-4.149E+04	-3.852E+04	-2.408E+04	1.661E+03	1.329E+04	108
365	1	3.897E+03	2.140E+04	2.832E+04	2.016E+03	2.486E+03	3.137E+03
366	1	-2.823E+03	-6.815E+03	5.304E+03	7.831E+03	4.081E+03	6.511E+03
367	1	-3.980E+04	-3.779E+04	-2.292E+04	62.0	1.332E+04	144
368	1	4.471E+03	2.268E+04	2.657E+04	121	2.411E+03	133
369	1	1.612E+04	-7.592E+03	1.803E+04	378	7.275E+03	255
373	1	-5.933E+04	-4.576E+04	-3.943E+04	856	104	-447
374	1	-2.317E+04	-8.439E+03	2.555E+04	7.268E+03	337	731
375	1	-8.463E+03	-3.977E+04	-2.200E+03	8.815E+03	7.695E+03	3.093E+03
376	1	-5.779E+04	-4.429E+04	-3.753E+04	79.3	-107	59.4
377	1	-1.966E+04	-1.181E+04	2.510E+04	273	1.408E+03	106
378	1	6.354E+03	-4.562E+04	8.729E+03	261	8.570E+03	-134
380	1	-1.471E+05	-1.270E+05	-7.041E+04	4.458E+03	-382	1.660E+04
381	1	-1.944E+05	-1.299E+05	-7.224E+04	6.151E+03	7.818E+03	1.523E+04
383	1	-1.383E+05	-1.368E+05	-6.155E+04	2.873E+03	2.052E+03	7.031E+03

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384	1	-1.522E+05	-1.426E+05	-6.298E+04	1.112E+03	6.800E+03	5.918E+03
386	1	-1.391E+05	-1.414E+05	-6.034E+04	-95.0	2.615E+03	-455
387	1	-1.604E+05	-1.516E+05	-6.523E+04	-255	8.334E+03	-1.140E+03
389	1	-4.104E+04	-4.135E+04	-3.662E+04	1.005E+04	8.392E+03	9.061E+03
390	1	-4.164E+04	-5.012E+04	-4.588E+04	3.217E+03	1.557E+04	1.164E+04
392	1	8.834E+03	-2.179E+04	5.456E+03	2.029E+03	1.243E+04	6.952E+03
393	1	1.667E+04	-1.187E+04	5.092E+03	-6.871E+03	1.784E+04	8.385E+03
395	1	1.811E+04	-1.433E+04	1.164E+04	-800	1.588E+04	341
396	1	1.571E+04	-2.322E+03	-3.586E+03	-101	1.596E+04	302
398	1	-4.918E+04	-5.873E+04	-5.263E+04	1.032E+04	9.506E+03	3.612E+03
399	1	-5.044E+04	-6.624E+04	-5.679E+04	3.791E+03	7.224E+03	-1.277E+03
401	1	1.241E+03	-5.052E+04	-431	2.320E+03	8.231E+03	-365
402	1	-1.578E+03	-4.151E+04	7.722E+03	-7.771E+03	7.367E+03	-1.217E+03
404	1	3.960E+03	-4.670E+04	7.343E+03	-370	8.133E+03	-116
405	1	-1.174E+04	-3.534E+04	6.394E+03	-370	8.619E+03	134
407	1	-1.757E+05	-1.280E+05	-7.423E+04	1.361E+04	1.681E+04	1.381E+04
408	1	-1.764E+05	-1.870E+05	-1.557E+05	1.939E+04	4.137E+04	5.848E+03
410	1	-1.677E+05	-1.477E+05	-4.088E+04	1.147E+03	1.381E+04	4.045E+03
411	1	-1.740E+05	-1.958E+05	-1.464E+05	-845	3.063E+04	4.949E+03
413	1	-1.745E+05	-1.640E+05	-7.440E+04	-530	1.595E+04	-2.154E+03
414	1	-1.731E+05	-1.984E+05	-1.447E+05	-1.028E+03	2.614E+04	72.0
416	1	-5.794E+04	-5.653E+04	-7.134E+04	3.180E+03	1.404E+04	1.209E+04
417	1	-4.024E+04	-2.045E+04	-3.558E+04	-522	3.861E+03	1.277E+04
419	1	1.950E+04	-2.545E+03	578	-1.104E+04	1.249E+04	1.071E+04
420	1	1.167E+04	1.503E+04	1.668E+04	-9.881E+03	2.295E+03	1.061E+04
422	1	1.660E+04	4.289E+03	-6.850E+03	809	6.537E+03	467
423	1	1.063E+04	9.585E+03	7.305E+03	264	-1.412E+03	160
425	1	-7.101E+04	-6.901E+04	-7.172E+04	1.600E+03	6.309E+03	-1.224E+03
426	1	-6.242E+04	-4.947E+04	-5.019E+04	-2.554E+03	3.799E+03	-2.083E+03
428	1	-1.192E+04	-3.325E+04	4.980E+03	1.368E+04	8.239E+03	-764
429	1	-2.124E+04	1.948E+04	1.118E+04	-1.362E+04	5.305E+03	-457
431	1	-2.153E+04	-3.107E+04	841	876	9.307E+03	207
432	1	-2.032E+04	-2.439E+04	6.137E+03	363	6.823E+03	194
433	1	-1.854E+05	-2.350E+05	-2.303E+05	-795	-4.413E+04	8.024E-02
435	1	-1.817E+05	-2.275E+05	-2.232E+05	1.542E+04	-4.418E+04	-1.034E+04
439	1	-1.145E+05	-2.317E+05	-2.129E+05	-942	4.260E+03	-296
441	1	-1.084E+05	-2.130E+05	-2.014E+05	3.235E+04	3.467E+03	5.007E+03
445	1	-1.374E+05	-2.331E+05	-1.413E+05	-1.171E+03	-2.895E+03	222
447	1	-1.402E+05	-2.214E+05	-1.345E+05	2.764E+04	-3.129E+03	434
469	1	-1.311E+05	-2.581E+05	-2.210E+05	307	-2.606E+03	-75.1
471	1	-1.324E+05	-2.579E+05	-2.219E+05	-842	-1.969E+03	262
473	1	-1.334E+05	-2.593E+05	-2.214E+05	205	-1.817E+03	960
475	1	-1.701E+05	-2.644E+05	-1.885E+05	279	-2.238E+04	-553
477	1	-1.613E+05	-2.740E+05	-1.886E+05	4.065E+03	-2.498E+04	-302
479	1	-1.427E+05	-2.691E+05	-1.892E+05	-328	-2.346E+04	915
481	1	-1.506E+05	-2.273E+05	-1.271E+05	859	3.066E+04	-28.4

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ABAGUS VERSION 4-4-75

MACH 14 FLOW RESTRICTOR

483	1	-1.421E+05	-2.182E+05	-1.210E+05	2.557E+03	3.060E+04	1.382E+03
485	1	-1.450E+05	-2.262E+05	-1.214E+05	1.877E+03	3.030E+04	-3.459E+03
487	1	-2.050E+05	-1.891E+05	-2.183E+05	4.314E+04	-1.890E+03	-1.225E+04
489	1	-1.585E+05	-2.524E+05	-2.183E+05	5.575E+04	2.526E+03	-1.788E+03
491	1	-1.227E+05	-2.246E+05	-2.154E+05	-785	3.234E+03	458
493	1	-2.249E+05	-2.105E+05	-1.775E+05	5.117E+04	2.023E+04	-3.792E+03
495	1	-1.841E+05	-2.251E+05	-1.705E+05	5.059E+04	1.819E+04	-1.922E+04
497	1	-1.923E+05	-2.435E+05	-2.008E+05	9.839E+03	2.440E+04	1.117E+03
501	1	-1.609E+05	-1.800E+05	-1.282E+05	7.741E+03	-2.453E+04	2.905E+04
503	1	-8.314E+04	-1.159E+05	-1.223E+05	7.875E+04	-1.634E+04	2.001E+04
505	1	-2.481E+05	-1.360E+05	-2.038E+05	3.001E+04	1.936E+03	-777
507	1	-2.557E+05	-1.792E+05	-2.152E+05	4.147E+04	1.312E+03	-1.513E+04
511	1	-2.757E+05	-1.967E+05	-1.972E+05	2.340E+04	-8.447E+03	-1.353E+04
513	1	-2.499E+05	-1.292E+05	-1.646E+05	1.022E+04	4.488E+03	-1.809E+04
517	1	-2.205E+05	-1.830E+05	-1.271E+05	4.071E+03	5.859E+03	1.571E+04
519	1	-2.071E+05	-1.351E+05	-1.169E+05	1.544E+04	937	4.877E+04
523	1	-1.658E+05	-2.069E+05	-2.091E+05	5.281E+04	-3.433E+03	-595
525	1	-2.288E+05	-1.697E+05	-2.134E+05	6.096E+04	-3.845E+03	-5.866E+03
529	1	-2.058E+05	-2.364E+05	-1.955E+05	4.921E+04	-2.322E+04	-8.613E+03
531	1	-2.334E+05	-1.899E+05	-1.849E+05	4.980E+04	-1.782E+04	-2.034E+04
535	1	-1.614E+05	-1.827E+05	-1.088E+05	3.322E+04	3.304E+04	2.052E+04
537	1	-1.819E+05	-1.524E+05	-1.151E+05	3.642E+04	2.399E+04	3.772E+04
541	1	-1.288E+05	-2.623E+05	-2.287E+05	1.344E+03	-2.871E+03	-70.7
542	1	-5.803E+04	-5.889E+04	-7.895E+04	-670	-1.474E+04	121
543	1	-1.459E+05	-2.496E+05	-2.277E+05	4.116E+04	-3.057E+03	-651
544	1	-5.464E+04	-5.991E+04	-7.497E+04	1.859E+03	-1.386E+04	-4.591E+03
547	1	-1.684E+05	-2.704E+05	-1.905E+05	481	-2.877E+04	-347
548	1	-6.130E+04	-9.371E+04	-1.093E+05	346	-2.082E+04	154
549	1	-1.761E+05	-2.589E+05	-1.888E+05	3.125E+04	-2.985E+04	-5.592E+03
550	1	-6.251E+04	-9.255E+04	-1.104E+05	1.088E+04	-1.848E+04	-3.454E+03
553	1	-1.344E+05	-2.047E+05	-1.100E+05	1.441E+03	4.225E+04	227
555	1	-1.412E+05	-1.944E+05	-1.098E+05	1.945E+04	4.092E+04	1.254E+04
579	1	-1.314E+05	-2.583E+05	-2.205E+05	-573	-2.405E+03	-114
581	1	-1.344E+05	-2.614E+05	-2.229E+05	-323	-1.691E+03	111
585	1	-1.658E+05	-2.750E+05	-1.914E+05	949	-2.360E+04	-109
587	1	-1.642E+05	-2.756E+05	-1.914E+05	-441	-2.423E+04	-218
591	1	-1.438E+05	-2.197E+05	-1.183E+05	-3.574E+03	3.022E+04	461
593	1	-1.531E+05	-2.267E+05	-1.222E+05	-163	3.032E+04	233
613	1	-1.403E+05	-2.392E+05	-1.391E+05	-846	3.157E+03	11.5
615	1	-1.394E+05	-2.453E+05	-1.410E+05	1.461E+03	3.546E+03	145
617	1	-1.408E+05	-2.471E+05	-1.418E+05	-254	3.479E+03	-426
619	1	-1.325E+05	-2.539E+05	-2.221E+05	-1.117E+03	4.154E+03	142
621	1	-1.312E+05	-2.594E+05	-2.234E+05	1.208E+03	4.034E+03	-19.1
623	1	-1.335E+05	-2.615E+05	-2.250E+05	-844	4.107E+03	24.4
625	1	-1.337E+05	-2.504E+05	-2.295E+05	-404	3.514E+03	159

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MACH 14 FLOW RESTRICTOR

627	1	-1.327E+05	-2.528E+05	-2.301E+05	799	3.751E+03	-83.7
629	1	-1.344E+05	-2.550E+05	-2.315E+05	-120	3.624E+03	-82.0
631	1	-2.080E+05	-1.608E+05	-1.334E+05	-4.231E+04	-4.221E+03	-642
633	1	-1.632E+05	-1.616E+05	-1.945E+05	-2.960E+04	-4.434E+03	4.288E+03
635	1	-1.245E+05	-8.610E+04	5.019E+04	1.854E+04	-1.048E+04	6.782E+04
637	1	-2.070E+05	-1.528E+05	-2.264E+05	-5.640E+04	3.945E+03	5.445E+03
639	1	-1.467E+05	-1.610E+05	-1.869E+05	-3.958E+04	-470	5.181E+03
641	1	-1.131E+05	-1.035E+05	-1.629E+05	2.078E+04	-613	-5.321E+03
643	1	-2.093E+05	-1.570E+05	-2.286E+05	-5.929E+04	3.660E+03	9.372E+03
645	1	-1.171E+05	-1.919E+05	-2.148E+05	-4.935E+04	1.777E+03	2.459E+04
647	1	-1.171E+05	-1.846E+05	-2.033E+05	7.645E+03	4.235E+03	3.249E+04
649	1	-2.549E+05	-1.470E+05	-1.409E+05	2.997E+04	4.950E+03	1.219E+03
651	1	-2.524E+05	-1.409E+05	-1.430E+05	1.393E+04	-1.074E+03	4.234E+03
653	1	-2.644E+05	-1.410E+05	-2.414E+05	3.389E+04	1.333E+04	1.591E+03
655	1	-2.638E+05	-1.263E+05	-2.324E+05	-1.688E+04	1.060E+04	5.003E+03
657	1	-2.597E+05	-1.413E+05	-2.432E+05	3.185E+04	7.201E+03	2.340E+03
661	1	-2.534E+05	-1.257E+05	-2.342E+05	-1.620E+04	5.757E+03	5.215E+03
663	1	-1.845E+05	-1.974E+05	-1.379E+05	4.670E+04	2.644E+03	-7.993E+03
667	1	-1.784E+05	-2.108E+05	-1.505E+05	5.438E+04	1.073E+04	4.171E+03
673	1	-2.273E+05	-1.764E+05	-2.505E+05	6.593E+04	8.210E+03	8.459E+03
675	1	-1.847E+05	-2.188E+05	-2.475E+05	6.718E+04	8.145E+03	-1.059E+03
679	1	-2.290E+05	-1.764E+05	-2.444E+05	6.601E+04	7.909E+03	-433
681	1	-1.798E+05	-2.174E+05	-1.439E+05	1.124E+04	7.808E+03	-4.284E+04
687	1	-1.424E+05	-1.990E+05	-1.676E+05	2.627E+04	7.356E+03	-1.670E+04
691	1	-1.634E+05	-2.455E+05	-2.443E+05	3.717E+04	1.918E+04	-2.800E+04
692	1	-9.615E+04	-1.492E+05	-1.714E+05	-6.313E+03	-1.901E+03	2.974E+04
693	1	-1.527E+05	-2.179E+05	-2.363E+05	-3.157E+03	-1.161E+03	2.463E+04
697	1	-9.511E+04	-1.064E+05	-1.208E+05	2.912E+04	-5.995E+03	2.601E+04
699	1	-1.388E+05	-2.497E+05	-2.422E+05	-1.855E+03	1.852E+03	4.234E+03
698	1	-9.012E+04	-1.336E+05	-1.363E+05	8.464E+03	4.935E+03	1.159E+04
699	1	-1.544E+05	-2.563E+05	-2.509E+05	3.805E+04	5.790E+03	-7.553E+03
700	1	-8.638E+04	-1.011E+05	-1.130E+05	1.287E+04	4.219E+03	8.738E+03
704	1	-1.167E+05	-1.226E+05	-2.539E+05	1.504E+04	6.654E+03	3.870E+03
706	1	-7.371E+04	-7.546E+04	-1.443E+05	-2.979E+03	-6.894E+03	3.684E+03
708	1	-8.434E+04	-7.040E+04	-1.442E+05	-1.030E+03	-9.215E+03	1.169E+03
710	1	-5.448E+03	3.480E+04	2.161E+04	1.804E+04	-4.068E+03	-3.171E+03
712	1	-7.694E+03	1.511E+04	1.235E+04	-7.071E+03	4.421E+03	1.118E+04
714	1	-3.557E+04	2.064E+04	1.824E+03	-4.888E+03	-1.184E+03	1.389E+04
716	1	-4.083E+04	7.801E+03	3.785E+03	-7.348E+03	2.223E+04	-3.458E+03
718	1	-2.969E+04	-9.178E+03	2.246E+03	-9.735E+03	2.183E+04	-2.203E+03
720	1	-1.404E+05	-2.464E+05	-1.414E+05	1.031E+03	3.289E+03	-142
723	1	-1.393E+05	-2.471E+05	-1.415E+05	13.6	3.428E+03	-175
725	1	-1.333E+05	-2.600E+05	-2.245E+05	697	3.891E+03	67.8

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ABAQUS VERSION 4.4-75

MACH 14 FLOW RESTRICTOR

731	1	-1.324E+05	-2.607E+05	-2.245E+05	-239	4.011E+03	-66.7
735	1	-1.338E+05	-2.540E+05	-2.309E+05	240	3.874E+03	-31.6
737	1	-1.346E+05	-2.553E+05	-2.317E+05	-344	3.705E+03	-61.3
742	1	-9.572E+04	-7.217E+04	-371	-298	-7.274E+03	670
744	1	-9.746E+04	-7.405E+04	-1.737E+03	-24.4	-5.936E+03	-4.37
748	1	-1.051E+04	-1.037E+03	-6.573E+03	958	-3.281E+03	7.168E+03
750	1	-1.053E+04	-3.147E+03	-8.353E+03	349	-2.871E+03	73.0
754	1	-2.489E+04	-1.995E+04	-6.693E+03	-3.622E+03	2.037E+04	-848
756	1	-2.512E+04	-2.174E+04	-8.007E+03	354	1.963E+04	-168
757	1	-1.024E+05	-1.625E+05	-9.226E+04	-3.163E+03	5.140E+03	4.399E+03
759	1	-1.225E+05	-1.340E+05	-6.787E+04	-20.4	6.859E+03	-486
759	1	-1.043E+05	-1.651E+05	-9.124E+04	1.963E+03	6.407E+03	2.486E+03
760	1	-1.214E+05	-1.368E+05	-6.907E+04	-3.413E+03	3.421E+03	495
761	1	-1.064E+05	-1.734E+05	-9.100E+04	14.7	7.401E+03	-683
762	1	-1.205E+05	-1.421E+05	-6.898E+04	-1.515E+03	1.659E+03	-499
763	1	-8.714E+04	-1.830E+05	-1.360E+05	7.060E+03	3.942E+03	-9.374E+03
764	1	-1.303E+04	7.112E+03	1.643E+04	316	3.278E+03	1.984E+03
765	1	-8.705E+04	-1.910E+05	-1.299E+05	-6.645E+03	5.008E+03	1.182E+04
766	1	7.921E+03	-170	2.832E+04	4.265E+03	8.854E+03	884
767	1	-7.771E+04	-1.823E+05	-1.244E+05	-2.282E+03	-1.757E+03	1.384E+03
768	1	2.047E+03	7.172E+03	2.288E+04	1.491E+03	1.283E+04	-2.110E+03
777	1	-1.080E+05	-1.763E+05	-9.215E+04	-584	7.267E+03	815
778	1	-1.185E+05	-1.413E+05	-6.963E+04	-371	2.387E+03	-269
779	1	-1.078E+05	-1.754E+05	-9.133E+04	-194	6.970E+03	-42.0
780	1	-1.177E+05	-1.414E+05	-6.850E+04	-4.51	2.716E+03	43.5
783	1	-7.601E+04	-1.801E+05	-1.274E+05	-46.3	-1.948E+03	734
784	1	-338	5.700E+03	2.162E+04	-215	1.190E+04	-443
785	1	-7.604E+04	-1.806E+05	-1.262E+05	261	-1.498E+03	202
786	1	143	4.603E+03	2.151E+04	48.5	1.064E+04	40.7
799	1	-1.345E+05	-2.524E+05	-2.334E+05	267	2.937E+03	-31.7
800	1	-6.190E+04	-4.633E+04	-4.584E+04	-405	704	0.762
801	1	-1.348E+05	-2.521E+05	-2.333E+05	-266	2.741E+03	-7.53
802	1	-6.179E+04	-4.585E+04	-4.524E+04	-551	652	-35.7
803	1	-1.354E+05	-2.533E+05	-2.339E+05	588	2.964E+03	4.96
804	1	-6.015E+04	-4.247E+04	-4.200E+04	-579	534	-20.5
805	1	-1.356E+05	-2.519E+05	-2.392E+05	49.6	3.670E+03	-11.3
806	1	-6.118E+04	-4.421E+04	-4.424E+04	-35.3	767	47.2
807	1	-1.351E+05	-2.523E+05	-2.393E+05	344	3.603E+03	-42.4
808	1	-6.119E+04	-4.283E+04	-4.534E+04	-912	813	50.6
809	1	-1.357E+05	-2.533E+05	-2.401E+05	356	3.522E+03	-40.1
810	1	-5.992E+04	-3.934E+04	-4.151E+04	-937	756	134
823	1	-2.178E+05	-1.697E+05	-2.354E+05	-5.554E+04	647	3.911E+03
824	1	-5.209E+04	-6.334E+04	-5.105E+04	4.950E+03	3.056E+03	1.176E+03
825	1	-1.617E+05	-2.284E+05	-2.442E+05	-5.434E+04	-3.234E+03	-7.263E+03
826	1	-6.121E+04	-5.449E+04	-4.825E+04	7.590E+03	2.663E+03	-993
827	1	-1.236E+05	-2.500E+05	-2.343E+05	-9.899E+03	-4.313E+03	8.285E+03



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MACH 14 FLOW RESTRICTOR

828	1	-6.384E+04	-3.972E+04	-4.712E+04	-2.450E+03	-983	359
829	1	-2.202E+05	-1.639E+05	-2.423E+05	-6.152E+04	-3.184E+03	2.650E+03
830	1	-4.758E+04	-6.150E+04	-5.348E+04	7.125E+03	187	1.714E+03
831	1	-1.432E+05	-2.240E+05	-2.429E+05	-5.325E+04	-3.546E+03	-976
832	1	-5.648E+04	-4.632E+04	-4.791E+04	6.229E+03	-957	717
833	1	-1.315E+05	-2.641E+05	-2.420E+05	-1.319E+03	-5.043E+03	-2.414E+03
834	1	-6.213E+04	-4.049E+04	-4.709E+04	913	428	30.0
847	1	-2.527E+05	-1.414E+05	-2.467E+05	3.040E+04	5.911E+03	1.783E+03
848	1	-4.810E+04	-6.531E+04	-6.019E+04	3.411E+03	5.275E+03	-326
849	1	-2.517E+05	-1.340E+05	-2.399E+05	-1.827E+04	4.405E+03	1.889E+03
850	1	-4.963E+04	-6.529E+04	-5.642E+04	5.313E+03	5.768E+03	2.138E+03
853	1	-2.484E+05	-1.390E+05	-2.549E+05	2.777E+04	2.438E+03	4.562E+03
854	1	-4.632E+04	-6.218E+04	-5.880E+04	-2.862E+03	1.478E+03	1.543E+03
855	1	-2.483E+05	-1.279E+05	-2.476E+05	-1.315E+04	-3.483E+03	284
856	1	-4.178E+04	-6.284E+04	-5.724E+04	8.925E+03	2.928E+03	3.838E+03
871	1	-1.805E+05	-2.151E+05	-2.531E+05	6.195E+04	7.869E+03	-1.898E+03
872	1	-5.592E+04	-4.858E+04	-4.349E+04	-6.232E+03	6.036E+03	-266
873	1	-2.238E+05	-1.733E+05	-2.514E+05	6.012E+04	6.434E+03	-1.879E+03
874	1	-4.008E+04	-6.158E+04	-7.230E+04	-2.751E+03	6.408E+03	-734
877	1	-1.812E+05	-2.155E+05	-2.640E+05	6.207E+04	4.578E+03	-114
878	1	-5.593E+04	-3.813E+04	-5.608E+04	-1.365E+04	356	639
879	1	-2.183E+05	-1.742E+05	-2.589E+05	5.672E+04	2.443E+03	2.724E+03
880	1	-5.292E+04	-6.364E+04	-4.549E+04	-1.492E+03	1.084E+03	1.831E+03
896	1	-7.568E+04	-9.810E+04	-1.245E+05	-1.031E+03	5.183E+03	-375
895	1	-1.395E+05	-2.638E+05	-2.649E+05	3.734E+04	7.347E+03	-2.764E+03
897	1	-1.503E+05	-2.464E+05	-2.607E+05	3.985E+03	5.978E+03	-2.841E+03
898	1	-7.492E+04	-8.180E+04	-1.076E+05	3.985E+03	6.673E+03	-1.560E+03
901	1	-1.364E+05	-2.569E+05	-2.612E+05	-242	4.299E+03	-15.5
902	1	-4.960E+04	-6.649E+04	-9.235E+04	1.275E+03	1.749E+03	444
903	1	-1.477E+05	-2.429E+05	-2.604E+05	3.637E+04	5.334E+03	-934
904	1	-4.550E+04	-5.908E+04	-8.350E+04	-2.602E+03	1.281E+03	-429
920	1	-3.162E+04	1.629E+04	3.067E+03	-433	725	231
922	1	-2.805E+04	1.314E+04	2.989E+03	-9.647E+03	1.274E+03	69.0
924	1	-2.022E+04	-249	-1.658E+03	-1.204E+04	1.545E+03	81.9
926	1	-3.604E+04	1.333E+04	-4.378E+03	-447	-622	-75.0
928	1	-3.388E+04	9.250E+03	-4.317E+03	-8.917E+03	-910	59.8
930	1	-2.379E+04	-1.765E+03	-5.671E+03	-1.101E+04	-1.088E+03	-238
945	1	-1.344E+05	-2.530E+05	-2.335E+05	-301	2.774E+03	1.24
946	1	-4.000E+04	-4.303E+04	-4.152E+04	128	523	-63.4
947	1	-1.367E+05	-2.549E+05	-2.350E+05	-325	2.935E+03	-7.24
948	1	-5.834E+04	-4.054E+04	-3.927E+04	133	391	-4.56
951	1	-1.350E+05	-2.533E+05	-2.399E+05	-86.2	3.723E+03	-80.1
952	1	-6.003E+04	-3.947E+04	-4.083E+04	-241	717	165
953	1	-1.369E+05	-2.551E+05	-2.412E+05	-401	3.481E+03	5.85
954	1	-5.848E+04	-3.853E+04	-3.846E+04	157	762	-7.54
959	1	-1.863E+04	-1.870E+04	-3.051E+03	-1.921E+04	6.493E+03	-1.292E+03

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970	1	-1.667E+04	-1.073E+04	-7.961E+03	-5.035E+03	1.416E+03	8.05
971	1	-1.632E+04	-2.128E+04	-9.366E+03	7.20	6.811E+03	147
972	1	-1.643E+04	-1.251E+04	-7.534E+03	-60.5	1.154E+03	5.36
973	1	-1.379E+04	-1.214E+04	-877.	-1.349E+04	-2.379E+03	-2.866E+03
976	1	-2.016E+04	-1.138E+04	-1.021E+04	-4.891E+03	-291.	195.
977	1	-1.461E+04	-1.534E+04	-8.802E+03	553.	-247.	133.
978	1	-2.162E+04	-1.342E+04	-1.057E+04	106.	-370.	-35.8
995	1	-4.808E+04	1.579E+04	2.283E+04	1.023E+03	1.385E+03	-111.
998	1	-4.129E+04	1.383E+04	2.596E+04	1.272E+04	997.	-701.
1001	1	-2.872E+04	-2.262E+03	2.665E+04	1.809E+04	689.	-738.
1004	1	-4.412E+04	2.107E+04	2.454E+04	86.9	335.	6.831E-02
1007	1	-3.920E+04	1.375E+04	2.536E+04	1.326E+04	597.	-91.2
1010	1	-2.542E+04	1.709E+03	2.506E+04	1.759E+04	554.	-486.
1022	1	-1.804E+04	-1.254E+04	-2.125E+04	91.8	-5.020E+03	88.6
1023	1	-1.389E+04	-9.752E+03	-1.750E+04	83.9	-89.5	-38.2
1025	1	-1.781E+04	-1.119E+04	-2.060E+04	194.	-4.519E+03	333.
1026	1	-1.422E+04	-1.038E+04	-1.774E+04	317.	-69.6	-76.0
1028	1	-1.732E+04	-9.801E+03	-1.946E+04	147.	-3.663E+03	399.
1039	1	-1.439E+04	-1.104E+04	-1.792E+04	163.	-73.9	-68.3
1031	1	-1.327E+04	-7.849E+03	-1.526E+04	-67.6	3.039E+03	-62.0
1032	1	-1.478E+04	-1.056E+04	-1.781E+04	47.4	425.	46.5
1034	1	-1.377E+04	-8.400E+03	-1.543E+04	42.5	2.647E+03	172.
1035	1	-1.491E+04	-1.053E+04	-1.788E+04	112.	364.	61.4
1037	1	-1.425E+04	-7.997E+03	-1.519E+04	-220.	2.016E+03	213.
1040	1	-1.488E+04	-1.118E+04	-1.810E+04	-106.	259.	91.6
1041	1	-2.008E+04	-9.250E+03	-1.480E+04	-16.1	1.224E+03	32.7
1043	1	-1.672E+04	-1.126E+04	-1.793E+04	64.5	-601.	-3.11
1044	1	-2.014E+04	-9.649E+03	-1.512E+04	-202.	1.026E+03	232.
1046	1	-1.683E+04	-1.126E+04	-1.800E+04	229.	-452.	-46.8
1047	1	-1.959E+04	-9.134E+03	-1.501E+04	-339.	311.	470.
1047	1	-1.668E+04	-1.188E+04	-1.831E+04	122.	-349.	-113.
1070	1	-2.285E+04	-1.413E+04	2.318E+04	1.107E+04	610.	-134.
1071	1	-3.595E+03	-5.184E+04	-1.374E+03	8.673E+03	4.659E+03	170.
1073	1	-1.719E+04	-2.012E+04	2.369E+04	370.	942.	-9.92
1074	1	8.760E+03	-5.427E+04	8.627E+03	-105.	5.415E+03	-29.9
1079	1	-1.997E+04	-1.209E+04	1.985E+04	1.100E+04	322.	-351.
1080	1	2.041E+03	-4.889E+04	-1.698E+03	9.009E+03	824.	-107.
1082	1	-1.390E+04	-1.848E+04	1.907E+04	466.	463.	15.5
1083	1	1.200E+04	-5.041E+04	5.919E+03	-382.	953.	-138.
1106	1	2.857E+03	-5.277E+04	-648.	332.	5.073E+03	-808.
1107	1	812.	-4.046E+04	4.383E+03	-8.456E+03	5.084E+03	-1.493E+03
1109	1	2.952E+03	-4.838E+04	4.602E+03	-639.	5.581E+03	142.
1110	1	-9.092E+03	-3.390E+04	1.444E+03	-565.	5.156E+03	-77.0
1115	1	7.892E+03	-4.964E+04	326.	-144.	751.	-1.280E+03
1116	1	4.502E+03	-3.476E+04	4.197E+03	-9.669E+03	-2.749E+03	-2.948E+03
1118	1	6.478E+03	-3.964E+04	3.565E+03	-906.	-1.024E+03	-461.

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1177	1	-5.613E+03	-2.654E+04	-2.257E+03	-5.06	-1.364E+03	55.8
1142	1	-6.054E+03	-2.930E+04	4.037E+03	-1.491E+04	6.324E+03	-1.826E+03
1145	1	-1.601E+04	-2.654E+04	4.624E+03	832	7.618E+03	113
1151	1	-2.858E+03	-2.053E+04	3.794E+03	-1.467E+04	-1.513E+03	-3.350E+03
1154	1	-1.331E+04	-1.903E+04	5.727E+03	615	-939	48.8
1169	1	-1.723E+04	-1.069E+04	1.884E+04	281	-2.998E+03	134
1170	1	-1.448E+04	-1.085E+04	1.795E+04	219	-86.9	17.9
1172	1	-1.727E+04	-1.049E+04	1.824E+04	-73.3	-2.758E+03	31.9
1173	1	-1.450E+04	-1.105E+04	1.814E+04	18.9	-76.9	-11.9
1178	1	-1.448E+04	-9.045E+03	1.532E+04	-216	1.449E+03	179
1179	1	-1.490E+04	-1.116E+04	1.807E+04	61.0	156	49.7
1181	1	-1.491E+04	-9.364E+03	1.590E+04	-41.4	1.255E+03	21.4
1182	1	-1.494E+04	-1.125E+04	1.801E+04	28.5	116	1.76
1187	1	-1.698E+04	-1.004E+04	1.527E+04	-443	30.7	124
1188	1	-1.648E+04	-1.184E+04	1.843E+04	153	-279	-6.43
1190	1	-1.890E+04	-1.041E+04	1.550E+04	-11.8	-134	-1.71
1191	1	-1.634E+04	-1.184E+04	1.845E+04	16.9	-228	12.9
1201	1	-1.044E+05	-1.065E+05	7.398E+04	-1.238E+03	-9.610E+03	1.275E+03
1202	1	-1.770E+05	-2.264E+05	1.852E+05	-927	-3.620E+04	-691
1203	1	-1.281E+05	-2.057E+05	1.788E+05	-1.307E+04	-3.393E+03	-1.127E+03
1204	1	-1.077E+05	-1.115E+05	7.681E+04	3.919E+03	4.624E+03	4.359E+03
1205	1	-6.511E+04	2.981E+03	3.381E+04	9.198E+03	-2.287E+03	2.165E+03
1206	1	-5.444E+04	2.045E+04	3.098E+04	-8.821E+03	-4.823E+03	-2.660E+03
1207	1	-1.720E+05	-1.911E+05	1.814E+05	-3.556E+04	2.755E+04	-1.320E+04
1208	1	-7.975E+04	-2.116E+05	1.649E+05	3.262E+04	2.557E+03	-2.402E+03
1209	1	-9.673E+04	-9.324E+04	-6.136E+04	5.642E+03	-6.223E+03	697
1210	1	-1.701E+05	-2.164E+05	1.799E+05	-1.024E+03	-3.489E+04	2.121E+03
1211	1	-1.178E+05	-2.150E+05	1.759E+05	1.301E+04	5.880E+03	697
1212	1	-1.033E+05	-9.270E+04	6.772E+04	9.528E+03	2.438E+03	-5.078E+03
1213	1	-5.412E+04	-7.434E+03	4.287E+04	1.771E+04	348	-3.183E+03
1214	1	-5.120E+04	1.178E+04	3.104E+04	1.278E+03	249	-1.375E+03
1215	1	-2.014E+05	-2.023E+05	1.942E+05	-2.847E+04	1.894E+04	-2.877E+04
1216	1	-1.487E+05	-1.823E+05	1.872E+05	-3.836E+04	-1.948E+03	-9.310E+03
1217	1	-8.928E+04	-8.293E+04	-4.474E+04	7.173E+03	-5.843E+03	-3.269E+03
1218	1	-1.057E+05	-1.974E+05	1.593E+05	-4.447E+03	-3.392E+03	1.460E+03
1219	1	-1.099E+05	-9.705E+04	7.673E+04	7.403E+03	549	-1.199E+04
1220	1	-3.947E+04	6.229E+03	3.590E+04	1.368E+04	-1.815E+03	-3.947E+03
1221	1	-2.000E+05	-1.607E+05	-2.088E+05	-4.226E+04	-4.845E+03	-8.767E+03
1222	1	-8.399E+04	-1.110E+05	8.273E+04	1.859E+04	1.604E+03	-33.1
1223	1	-1.055E+05	-2.046E+05	1.718E+05	4.642E+03	4.360E+03	-192
1224	1	-1.327E+05	-2.090E+05	1.611E+05	-1.405E+04	-7.440E+03	1.273E+03
1225	1	-1.294E+04	-1.184E+04	-2.714E+04	-1.942E+04	-2.415E+03	423
1226	1	-2.717E+04	6.018E+04	4.621E+04	-2.041E+04	-1.212E+03	-945
1227	1	-5.739E+04	-1.988E+04	6.709E+03	7.975E+03	3.225E+03	2.094E+03
1228	1	-9.998E+04	-1.950E+05	-1.805E+05	2.113E+04	-5.234E+03	-463
1229	1	-8.618E+04	-2.158E+05	-1.504E+05	2.843E+04	5.481E+03	1.491E+03

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1230	1	-5.529E+04	-9.699E+04	-6.489E+04	-1.111E+04	969	-1.300E+03
1231	1	-9.223E+04	-2.099E+05	-1.650E+05	3.508E+03	4.124E+03	-664
1232	1	-1.197E+05	-2.208E+05	-1.578E+05	1.371E+04	-5.531E+03	-677
1233	1	-9.893E+04	-5.681E+04	-8.074E+04	-2.456E+03	-3.450E+03	-1.550E+03
1234	1	-1.949E+04	3.817E+04	4.191E+04	6.105E+03	-2.054E+03	-3.303E+03
1235	1	-5.826E+04	-2.672E+04	-601	-4.920E+03	1.469E+03	-4.391E+03
1236	1	-1.630E+05	-1.576E+05	-1.974E+05	-4.448E+04	7.120E+03	1.341E+03
1237	1	-1.554E+05	-1.857E+05	-1.695E+05	-3.444E+04	7.600E+03	2.55
1238	1	-5.503E+04	-7.314E+04	-5.072E+04	-4.558E+03	-136	-2.203E+03
1239	1	-1.081E+05	-2.034E+05	-1.427E+05	4.558E+03	1.045E+04	-1.897E+03
1240	1	-9.422E+04	-6.322E+04	-8.555E+04	-1.817E+04	4.530E+03	-1.073E+03
1241	1	-5.296E+04	-2.640E+04	-2.139E+03	5.702E+03	2.208E+03	-3.831E+03
1242	1	-2.049E+05	-1.504E+05	-1.820E+05	-4.227E+04	2.487E+03	-4.092E+03
1243	1	-1.272E+05	-1.777E+05	-1.004E+05	-370	-4.797E+03	-1.908E+03
1244	1	-1.369E+05	-2.155E+05	-1.351E+05	1.780E+03	-6.005E+03	-2.384E+03
1245	1	-1.251E+05	-1.849E+05	-1.013E+05	198	7.400E+03	-1.735E+03
1246	1	-1.143E+05	-1.300E+05	-6.288E+04	2.170E+03	3.856E+03	2.520E+03
1247	1	-1.413E+05	-2.139E+05	-1.347E+05	-2.428E+04	3.020E+03	-1.769E+03
1248	1	-1.243E+05	-1.656E+05	-9.758E+04	-5.84	-6.433E+03	1.138E+03
1249	1	-1.317E+05	-2.141E+05	-1.287E+05	1.647E+03	-9.731E+03	-3.289E+03
1250	1	-1.329E+05	-1.643E+05	-9.797E+04	-1.809E+04	9.165E+03	2.239E+03
1251	1	-1.177E+05	-1.243E+05	-6.781E+04	-243	4.619E+03	151
1252	1	-1.780E+05	-1.785E+05	-1.363E+05	-4.462E+04	4.597E+03	-2.203E+03
1253	1	-1.287E+05	-1.631E+05	-9.514E+04	164	-7.871E+03	-1.718E+03
1254	1	-1.569E+05	-1.436E+05	-1.068E+05	-2.474E+04	8.776E+03	-5.734E+03
1255	1	-1.031E+05	-1.032E+05	-1.142E+05	335	-8.486E+03	-118
1256	1	-1.817E+05	-2.297E+05	-2.256E+05	7.139E+03	-4.425E+04	-4.980E+03
1257	1	-1.326E+05	-2.321E+05	-2.330E+05	2.70	-6.538E+03	30.1
1258	1	-9.824E+04	6.371E+03	-3.267E+03	-6.154E+03	172	968
1259	1	-4.464E+04	150	-8.207E+03	625	-9.278E+03	157
1260	1	-1.001E+05	-9.282E+04	-1.020E+05	1.706E+03	-7.853E+03	285
1261	1	-1.948E+05	-2.192E+05	-2.229E+05	1.549E+04	-4.012E+04	-1.529E+04
1262	1	-1.254E+05	-2.133E+05	-2.201E+05	2.788E+04	-7.444E+03	1.297E+03
1263	1	-3.484E+04	1.584E+04	1.680E+04	-1.693E+04	962	2.857E+03
1264	1	-4.280E+04	7.084E+03	935	-9.527E+03	-9.274E+03	-803
1265	1	-8.137E+04	-5.979E+04	-6.580E+04	-5.537E+03	-4.001E+03	983
1266	1	-1.531E+05	-1.816E+05	-2.070E+05	3.822E+04	-9.125E+03	772
1267	1	-1.883E+04	1.686E+04	2.474E+04	-1.867E+04	-9.308E+03	-1.286E+03
1268	1	-6.524E+04	-1.095E+05	-1.081E+05	508	-8.003E+03	229
1269	1	-1.103E+05	-2.226E+05	-2.072E+05	1.545E+04	3.955E+03	2.334E+03
1270	1	-1.279E+05	-2.321E+05	-1.768E+05	-1.040E+03	-6.659E+03	-137
1271	1	-1.647E+04	1.798E+04	3.422E+03	-2.106E+03	-2.126E+04	-2.045E+03
1272	1	-6.248E+04	-5.053E+04	-2.508E+04	1.188E+03	-1.899E+04	116
1273	1	-6.481E+04	-9.453E+04	-9.689E+04	1.251E+04	-9.728E+03	160
1274	1	-1.295E+05	-1.984E+05	-2.002E+05	3.858E+04	-655	4.699E+03
1275	1	-1.257E+05	-2.182E+05	-1.678E+05	2.916E+04	-6.989E+03	782

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1276	1	-1.852E+03	3.242E+04	2.067E+04	-1.015E+04	-2.151E+04	-5.720E+03
1277	1	-6.616E+04	-4.289E+04	-2.066E+04	-534	-1.870E+04	-3.859E+03
1278	1	-5.439E+04	-4.919E+04	-3.992E+04	1.027E+04	-1.470E+04	-1.584E+03
1279	1	-1.522E+05	-1.842E+05	-1.576E+05	4.517E+04	-1.163E+04	-2.770E+03
1280	1	-5.735E+04	-3.255E+04	-7.887E+03	-7.176E+03	-1.462E+04	-5.358E+03
1281	1	-1.273E+05	-1.794E+05	-9.504E+04	579	-1.046E+04	116
1282	1	-1.373E+05	-2.269E+05	-1.373E+05	1.322E+04	-2.653E+03	14.4
1283	1	-1.342E+05	-1.341E+05	-6.028E+04	3.273E+03	-1.266E+04	-1.100E+03
1284	1	-1.348E+05	-1.709E+05	-9.165E+04	1.704E+04	-1.032E+04	-1.832E+03
1285	1	-1.584E+05	-2.102E+05	-1.348E+05	3.384E+04	-7.524E+03	-2.319E+03
1286	1	-1.379E+05	-1.263E+05	-5.508E+04	3.085E+03	-8.414E+03	-2.667E+03
1287	1	-1.493E+05	-1.529E+05	-8.504E+04	1.905E+04	-1.052E+04	-4.990E+03
1288	1	-3.701E+04	-3.751E+03	-1.068E+04	53.2	-2.989E+03	66.1
1291	1	-2.172E+04	-1.091E+04	-1.744E+04	-53.5	-1.627E+03	6.71
1292	1	-2.279E+04	-9.952E+03	-1.529E+04	-145	-3.763E+03	-240
1293	1	-2.207E+04	-8.991E+03	-1.590E+04	-182	-4.825E+03	5.56
1294	1	-1.888E+04	-1.279E+04	-1.924E+04	278	82.4	-44.8
1295	1	-2.065E+04	-1.381E+04	-2.015E+04	87.8	209	-58.6
1296	1	-3.297E+04	-3.116E+03	-9.004E+03	-4.957E+03	-3.102E+03	488
1299	1	-2.154E+04	-1.154E+04	-1.772E+04	-389	-1.583E+03	-180
1300	1	-2.229E+04	-9.819E+03	-1.594E+04	-357	-3.652E+03	-610
1301	1	-2.252E+04	-1.136E+04	-1.743E+04	-47.1	-4.610E+03	-495
1302	1	-1.861E+04	-1.246E+04	-1.914E+04	172	-136	-104
1303	1	-2.113E+04	-1.321E+04	-2.030E+04	395	169	-87.2
1304	1	-2.847E+04	-9.580E+03	-1.063E+04	-5.935E+03	-3.561E+03	534
1306	1	-2.076E+04	-1.133E+04	-1.779E+04	-384	-1.623E+03	-304
1307	1	-2.285E+04	-9.717E+03	-1.783E+04	-199	-3.819E+03	-613
1308	1	-2.104E+04	-1.458E+04	-2.081E+04	-98.4	195	-141
1309	1	-1.003E+04	1.049E+04	-6.996E+03	9.64	-1.358E+04	-187
1312	1	-7.043E+03	3.903E+03	-1.565E+04	9.46	-1.948E+03	36.4
1313	1	-5.562E+03	5.317E+03	-1.614E+04	-16.4	-4.820E+03	-137
1314	1	-7.177E+04	-5.676E+04	-3.526E+04	-92.7	-1.353E+03	-15.1
1315	1	-6.813E+03	1.844E+03	-1.615E+04	178	192	-125
1316	1	-7.108E+04	-6.194E+04	-3.547E+04	17.0	285	-4.66
1317	1	-7.825E+03	1.278E+04	-5.403E+03	-1.958E+03	-1.302E+04	-2.247E+03
1320	1	-7.229E+03	3.279E+03	-1.589E+04	-111	-1.756E+03	-244
1321	1	-6.142E+03	5.195E+03	-1.653E+04	301	-3.854E+03	-270
1322	1	-7.191E+04	-5.874E+04	-3.609E+04	-52.3	-1.070E+03	-70.4
1323	1	-6.843E+03	2.057E+03	-1.603E+04	65.0	387	-260
1324	1	-7.144E+04	-6.132E+04	-3.527E+04	104	243	6.37
1325	1	-7.345E+03	7.725E+03	-8.780E+03	-2.563E+03	-1.105E+04	-3.305E+03
1327	1	-7.155E+03	3.717E+03	-1.579E+04	-4.26	-1.326E+03	-254
1328	1	-7.213E+04	-5.821E+04	-3.571E+04	40.4	-1.123E+03	21.4
1329	1	-7.147E+04	-6.196E+04	-3.527E+04	-197	221	-73.6
1330	1	-1.486E+03	-1.389E+05	-6.346E+04	-21.8	-1.964E+03	44.3
1332	1	-1.524E+05	-1.404E+05	-5.911E+04	52.6	-1.95	-5.56

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1333	1	-1.539E+05	-1.340E+05	-5.721E+04	-387	1.871E+03	72.9
1334	1	-1.521E+05	-1.418E+05	-5.944E+04	-25.2	334	48.4
1335	1	-1.502E+05	-1.374E+05	-6.287E+04	-1.157E+03	-1.092E+03	-258
1337	1	-1.529E+05	-1.404E+05	-5.890E+04	51.9	-156	-79.6
1338	1	-1.547E+05	-1.380E+05	-5.843E+04	-735	1.220E+03	96.7
1339	1	-1.528E+05	-1.419E+05	-5.949E+04	-117	109	197
1340	1	-1.527E+05	-1.343E+05	-6.098E+04	302	341	-39.0
1341	1	-1.531E+05	-1.404E+05	-5.892E+04	132	-194	-123
1343	1	-1.713E+05	-2.200E+05	-1.804E+05	-1.378E+03	-3.234E+04	2.859E+03
1344	1	-1.527E+04	877	9.282E+04	1.479E+04	-1.210E+03	-3.457E+03
1348	1	-1.394E+05	-1.340E+05	-1.269E+05	1.001E+04	-1.240E+03	-1.312E+04
1350	1	-7.897E+04	-7.857E+04	-3.932E+04	6.359E+03	-4.703E+03	452
1351	1	-1.701E+05	-2.174E+05	-1.771E+05	-890	-3.154E+04	-207
1352	1	-1.139E+05	-2.014E+05	-1.641E+05	-5.207E+03	-2.417E+03	510
1353	1	-4.827E+04	-4.404E+04	-1.332E+04	9.787E+03	-4.643E+03	-2.783E+03
1354	1	-2.517E+04	-1.313E+03	5.429E+04	6.840E+03	-1.953E+03	940
1355	1	-2.832E+04	6.414E+03	4.758E+04	9.107E+03	-3.123E+03	-1.431E+03
1356	1	-3.490E+04	-8.344E+04	-2.725E+04	2.935E+03	-7.024E+03	-2.440E+03
1357	1	-7.783E+04	-7.811E+04	-6.490E+04	647	-8.912E+03	-4.012E+03
1358	1	-7.949E+04	-7.184E+04	-3.034E+04	795	-4.362E+03	-82.2
1359	1	-1.240E+05	-1.949E+05	-1.432E+05	-1.011E+03	-2.027E+03	130
1360	1	-1.489E+04	6.103E+04	5.431E+03	298	-7.478E+03	582
1361	1	-1.484E+04	3.492E+03	5.401E+04	59.3	-4.109E+03	-89.5
1362	1	-2.007E+04	-6.458E+04	-1.180E+05	2.908E+03	-9.428E+03	83.3
1363	1	-9.037E+04	-2.034E+05	-1.595E+05	-5.979E+03	2.778E+03	-582
1367	1	-9.123E+03	4.049E+04	4.809E+04	9.334E+03	-2.422E+03	-3.784E+03
1369	1	-1.381E+05	-9.872E+04	-1.368E+05	-2.271E+04	-7.930E+03	1.715E+03
1371	1	-4.841E+04	-6.273E+04	-4.015E+04	4.387E+03	-1.190E+03	-1.528E+03
1372	1	-1.003E+05	-1.981E+05	-1.412E+05	-4.192E+03	1.644E+03	-313
1373	1	-1.154E+05	-2.044E+05	-1.469E+05	-4.510E+03	-1.096E+04	-234
1374	1	-3.482E+04	-2.990E+04	-1.797E+04	-751	-4.360E+03	-1.449E+03
1375	1	5.144E+03	4.040E+04	5.820E+04	4.108E+03	-2.849E+03	-1.458E+03
1376	1	-4.954E+04	-2.204E+04	3.113E+03	2.810E+03	139	-4.289E+03
1377	1	-3.859E+04	-4.758E+04	-3.273E+04	425	-9.054E+03	139
1378	1	-1.044E+05	-7.908E+04	-7.002E+04	-3.720E+03	-240	-8.377E+03
1379	1	-4.321E+04	-5.270E+04	-3.010E+04	919	-1.495E+03	14.1
1380	1	-1.214E+05	-2.031E+05	-1.458E+05	-1.243E+03	-1.192E+04	-484
1381	1	-4.010E+03	-2.413E+04	8.402E+03	311	-5.484E+03	-150
1382	1	-4.288E+04	-1.791E+04	8.084E+03	232	579	-34.7
1383	1	-6.273E+04	-6.773E+04	-3.144E+04	2.523E+03	-4.492E+03	-504
1385	1	-1.360E+05	-2.137E+05	-1.294E+05	-12.0	-1.119E+04	-225
1387	1	-1.210E+05	-1.182E+05	-4.292E+04	3.411E+03	1.908E+03	-4.829E+03
1388	1	-1.823E+05	-1.357E+05	-1.178E+05	-2.240E+04	5.443E+03	-8.064E+03
1389	1	-1.292E+05	-1.984E+05	-8.979E+04	134	-8.433E+03	-942
1390	1	-1.374E+05	-2.124E+05	-1.292E+05	-349	-1.187E+04	30.3
1391	1	-1.427E+05	-1.227E+05	-8.051E+04	-7.443E+03	7.081E+03	-1.027E+04

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## MACH 14 FLOW RESTRICTOR

1392	1	-1.261E+05	-1.135E+05	-5.979E+04	-1.727E+03	613	-1.980E+03
1393	1	-1.473E+05	-1.198E+05	-8.177E+04	-2.224E+03	3.012E+03	-7.883E+03
1394	1	-1.304E+05	-1.540E+05	-8.834E+04	254	-9.056E+03	301
1395	1	-1.354E+05	-1.220E+05	-7.149E+04	144	4.760E+03	-1.087E+03
1396	1	-2.262E+05	-1.943E+05	-2.101E+05	-7.723E+03	3.881E+03	-3.840E+04
1399	1	-2.305E+05	-1.913E+05	-2.130E+05	6.417E+03	9.592E+03	-3.959E+04
1400	1	-1.330E+05	-1.296E+05	-1.224E+05	3.798E+03	-7.328E+03	-1.356E+04
1401	1	-2.302E+05	-1.279E+05	-2.122E+05	-3.153E+03	-1.018E+04	-4.184E+03
1402	1	-1.143E+05	-1.195E+05	-1.117E+05	8.772E+03	-7.991E+03	-4.325E+03
1403	1	-2.287E+05	-1.428E+05	-2.204E+05	3.954E+04	-1.130E+04	-1.265E+03
1404	1	-9.474E+04	-8.881E+04	-4.277E+04	6.970E+03	-6.298E+03	-9.685E+03
1407	1	-3.227E+04	-8.040E+04	-2.991E+04	2.673E+03	-6.354E+03	-1.977E+03
1408	1	-2.140E+04	-7.396E+04	-1.736E+04	3.007E+03	-5.734E+03	-1.467E+03
1409	1	-9.917E+04	-7.643E+04	-5.413E+04	-1.163E+04	-1.032E+04	-1.678E+03
1410	1	-1.364E+04	-9.103E+04	-2.143E+03	-3.014E+03	-2.937E+03	-1.971E+03
1411	1	-3.034E+04	-6.441E+04	-2.702E+04	3.494E+03	-1.039E+04	111
1412	1	-1.044E+04	-7.932E+04	-6.312E+03	905	-7.245E+03	1.259E+03
1414	1	-870	-9.594E+04	-8.335E+03	-1.072E+03	-2.299E+03	1.203E+03
1415	1	-8.749E+03	-6.329E+04	-2.680E+03	-327	-1.024E+04	409
1416	1	-1.441E+03	-3.913E+04	-2.264E+04	-1.340E+03	-9.653E+03	263
1417	1	-2.264E+05	-1.338E+05	-2.115E+05	-2.343E+04	-9.941E+03	4.261E+03
1420	1	-2.348E+05	-1.231E+05	-2.094E+05	1.800E+04	-1.294E+04	8.645E+03
1421	1	-1.477E+05	-8.814E+04	-1.294E+05	5.243E+03	-1.261E+04	3.792E+03
1422	1	-2.393E+05	-1.340E+05	-1.833E+05	-4.245E+03	-5.489E+03	-9.164E+03
1423	1	-1.227E+05	-8.604E+04	-1.139E+05	2.418E+04	-1.445E+04	4.038E+03
1424	1	-2.353E+05	-1.434E+05	-1.804E+05	3.953E+04	-1.030E+04	-2.878E+03
1425	1	-6.644E+04	-5.382E+04	-5.654E+04	4.952E+03	-1.061E+04	790
1428	1	-3.633E+04	-6.483E+04	-3.202E+04	1.008E+04	-1.520E+04	-712
1429	1	-2.253E+04	-6.347E+04	-1.840E+04	4.752E+03	-1.501E+04	120
1430	1	-9.327E+04	-7.784E+04	-5.777E+04	1.001E+04	-9.204E+03	-8.103E+03
1431	1	-1.764E+03	-2.196E+04	4.336E+03	1.621E+03	-2.032E+04	-1.743E+03
1432	1	-6.925E+04	-7.308E+04	-3.907E+04	7.317E+03	-1.451E+04	-1.032E+04
1433	1	-1.014E+03	-3.475E+04	1.915E+03	1.094E+03	-1.349E+04	-380
1435	1	-1.409E+04	-2.237E+04	1.741E+04	-708	-1.964E+04	-707
1436	1	-9.335E+04	-7.152E+04	-2.400E+04	-470	-1.298E+04	-1.072E+03
1437	1	-4.318E+04	-5.958E+04	-9.705E+03	-1.400E+03	-1.604E+04	-751
1438	1	-2.244E+05	-1.483E+05	-1.453E+05	-2.022E+04	1.914E+03	2.713E+03
1440	1	-2.302E+05	-1.392E+05	-1.364E+05	1.478E+04	-880	3.196E+03
1441	1	-1.912E+05	-1.273E+05	-1.130E+05	2.993E+03	-1.840E+03	-6.692E+03
1442	1	-1.820E+05	-1.354E+05	-1.040E+05	2.227E+04	-5.723E+03	-9.004E+03
1443	1	-1.569E+05	-1.208E+05	-9.241E+04	1.333E+03	-438	-1.552E+04
1445	1	-1.484E+05	-1.279E+05	-8.589E+04	1.015E+04	-6.941E+03	-1.728E+04
1446	1	-1.430E+05	-1.254E+05	-7.831E+04	3.959E+03	-5.509E+03	-7.704E+03
1447	1	-1.414E+05	-1.335E+05	-7.044E+04	4.812E+03	-7.167E+03	-7.250E+03
1448	1	-1.300E+05	-1.190E+05	-6.358E+04	1.383E+03	-3.330E+03	-318
1449	1	-1.294E+05	-1.269E+05	-5.721E+04	-80.9	-5.440E+03	198

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## MACH 14 FLOW RESTRICTOR

1450	1	-2.263E+05	-1.916E+05	-2.157E+05	2.245E+04	-2.130E+04	-3.258E+04
1453	1	-2.205E+05	-2.100E+05	-2.249E+05	2.552E+04	-3.383E+04	-2.580E+04
1454	1	-1.037E+05	-1.025E+05	-9.810E+04	4.855E+03	-7.124E+03	-1.431E+03
1455	1	-1.972E+05	-1.995E+05	-2.202E+05	5.748E+04	-9.907E+03	627.
1456	1	-7.405E+04	-8.029E+04	-7.590E+04	-1.191E+03	-6.455E+03	1.885E+03
1458	1	-1.429E+04	-5.395E+04	-2.610E+03	-1.307E+04	-3.031E+03	4.114E+03
1461	1	-1.438E+04	-1.983E+04	1.325E+04	-2.257E+04	189	6.626E+03
1462	1	-1.448E+04	-2.772E+04	5.055E+03	-7.642E+03	-1.751E+03	2.988E+03
1463	1	-1.630E+04	-3.750E+04	453	-1.487E+04	-9.422E+03	752.
1464	1	-2.742E+04	-1.869E+04	-1.143E+03	-7.458E+03	-2.165E+03	2.269E+03
1465	1	-2.387E+04	-7.254E+03	1.510E+04	-1.895E+04	-9.229E+03	133.
1466	1	-1.042E+04	-3.192E+04	1.033E+04	-2.537E+03	-924	1.738E+03
1468	1	-2.092E+04	-2.392E+04	522	845.	-2.841E+03	236.
1469	1	-1.692E+04	-1.641E+04	1.339E+04	-2.295E+03	-1.074E+04	-281.
1470	1	-1.160E+04	-1.289E+04	2.407E+03	1.588E+03	-1.031E+04	-497.
1471	1	-2.160E+05	-1.445E+05	-2.118E+05	5.438E+04	-8.982E+03	1.166E+04
1474	1	-1.766E+05	-1.768E+05	-2.108E+05	6.088E+04	-4.001E+03	8.782E+03
1475	1	-9.600E+04	-8.323E+04	-9.913E+04	2.538E+04	-1.249E+04	1.841E+03
1476	1	-2.023E+05	-1.644E+05	-1.739E+05	5.908E+04	-9.542E+03	1.161E+03
1477	1	-5.675E+04	-6.947E+04	-7.398E+04	1.620E+04	-1.302E+04	-1.850E+03
1479	1	-8.156E+03	-2.657E+04	-5.284E+03	-3.289E+03	-1.911E+04	-4.830E+03
1482	1	3.588E+03	5.481E+03	1.591E+04	-1.380E+04	-2.172E+04	-7.557E+03
1483	1	3.510E+03	-624.	1.158E+04	-3.157E+03	-2.154E+04	-3.426E+03
1484	1	-5.476E+04	-5.682E+04	-2.014E+04	-3.879E+03	-1.701E+04	-1.168E+04
1485	1	-4.483E+03	6.249E+03	3.558E+03	-4.727E+03	-1.945E+04	-4.151E+03
1486	1	-5.844E+04	-4.137E+04	-1.346E+04	-5.399E+03	-1.649E+04	-8.958E+03
1487	1	1.555E+04	5.078E+03	2.539E+04	-2.887E+03	-2.299E+04	-1.357E+03
1489	1	3.142E+03	5.331E+03	5.507E+03	258	-1.959E+04	-906.
1490	1	-6.050E+04	-5.304E+04	-2.328E+04	-2.072E+03	-1.260E+04	-131.
1491	1	-5.907E+04	-5.432E+04	-2.867E+04	843.	-7.396E+03	485.
1492	1	-2.179E+05	-1.589E+05	-1.357E+05	4.426E+04	-1.505E+03	1.801E+03
1494	1	-1.890E+05	-1.880E+05	-1.373E+05	5.114E+04	-4.094E+03	-1.889E+03
1495	1	-1.674E+05	-1.464E+05	-9.630E+04	2.905E+04	-7.247E+03	-8.259E+03
1496	1	-1.523E+05	-1.556E+05	-9.067E+04	2.381E+04	-9.647E+03	-7.504E+03
1497	1	-1.414E+05	-1.319E+05	-7.393E+04	7.897E+03	-1.105E+04	-1.599E+04
1499	1	-1.417E+05	-1.284E+05	-6.323E+04	4.783E+03	-9.674E+03	-1.036E+04
1500	1	-1.454E+05	-1.365E+05	-6.721E+04	2.930E+03	-4.163E+03	-4.218E+03
1501	1	-1.503E+05	-1.368E+05	-6.378E+04	1.374E+03	-1.823E+03	-1.334E+03
1502	1	-1.359E+05	-1.303E+05	-5.494E+04	-789.	-818.	1.068E+03
1503	1	-1.453E+05	-1.340E+05	-5.764E+04	-1.422E+03	1.416E+03	1.648E+03
1507	1	-3.590E+04	-4.309E+03	2.743E+03	-1.719E+04	-1.204E+03	2.152E+03
1509	1	-2.160E+04	-1.358E+04	5.431E+03	-1.662E+04	-1.254E+03	3.731E+03
1512	1	-2.117E+04	-1.164E+04	-2.348E+03	-3.560E+03	-4.635E+03	471.
1513	1	-2.164E+04	-1.040E+04	-4.604E+03	-8.510E+03	-9.493E+03	-1.287E+03
1514	1	-2.215E+04	-1.571E+04	-2.264E+03	-1.120E+03	-4.328E+03	-340.
1516	1	-2.898E+04	-1.393E+04	-9.098E+03	-526.	-9.231E+03	15.0



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1520	1	-7.190E+03	1.924E+04	8.146E+03	-1.260E+04	-1.913E+04	-5.982E+03
1522	1	157.	1.156E+04	9.754E+03	-1.176E+04	-1.964E+04	-6.866E+03
1525	1	1.239E+03	1.049E+04	-2.853E+03	-2.052E+03	-1.373E+04	-1.932E+03
1526	1	-6.656E+04	-5.384E+04	-3.040E+04	-2.558E+03	-7.289E+03	-2.670E+03
1527	1	243.	7.746E+03	-3.093E+03	1.305E+03	-1.471E+04	-210.
1529	1	-7.234E+04	-5.615E+04	-3.319E+04	-133.	-6.578E+03	21.5
1532	1	-1.480E+05	-1.307E+05	-5.752E+04	-912.	-2.324E+03	-1.423E+03
1533	1	-1.492E+05	-1.322E+05	-6.115E+04	1.298E+03	-2.735E+03	-4.032E+03
1535	1	-1.513E+05	-1.354E+05	-5.999E+04	-471.	799	-298
1536	1	-1.513E+05	-1.369E+05	-6.019E+04	-1.576E+03	899	1.005E+03
1541	1	-2.185E+04	-1.107E+04	-1.689E+04	-462.	-3.330E+03	-425
1543	1	-1.864E+04	-1.279E+04	-1.949E+04	115.	-136.	-141.
1545	1	-2.393E+04	-1.022E+04	-1.064E+04	-3.029E+03	-4.119E+03	-11.3
1548	1	-2.031E+04	-1.214E+04	-1.822E+04	-526.	-1.447E+03	-152.
1549	1	-2.097E+04	-1.039E+04	-1.691E+04	36.5	-3.219E+03	-218.
1550	1	-2.265E+04	-1.168E+04	-1.897E+04	-70.7	-3.184E+03	-393.
1551	1	-1.871E+04	-1.287E+04	-1.942E+04	213.	-110.	-66.9
1552	1	-2.108E+04	-1.398E+04	-2.070E+04	300.	203.	-97.3
1553	1	-2.229E+04	-1.084E+04	-1.070E+04	-77.2	-4.474E+03	65.5
1555	1	-1.997E+04	-1.239E+04	-1.839E+04	-62.2	-1.391E+03	0.205
1556	1	-2.314E+04	-1.205E+04	-1.937E+04	55.4	-2.931E+03	-19.6
1557	1	-2.123E+04	-1.394E+04	-2.074E+04	38.9	175.	-11.7
1562	1	-7.212E+03	4.217E+03	-1.673E+04	290.	-2.859E+03	-280.
1564	1	-7.071E+03	1.742E+03	-1.625E+04	8.30	392	-214.
1566	1	-5.449E+03	8.006E+03	-1.039E+04	-866.	-8.326E+03	-1.747E+03
1569	1	-7.418E+03	3.001E+03	-1.608E+04	-280.	-1.175E+03	-250.
1570	1	-7.505E+03	4.873E+03	-1.617E+04	341.	-2.384E+03	-80.7
1571	1	-7.278E+04	-5.919E+04	-3.553E+04	83.0	-818.	-85.5
1572	1	-7.255E+03	1.684E+03	-1.440E+04	111.	363.	-77.7
1573	1	-7.166E+04	-6.187E+04	-3.525E+04	124.	114	-3.29
1574	1	-5.080E+03	7.781E+03	-1.111E+04	-143.	-7.082E+03	-111.
1576	1	-7.378E+03	2.740E+03	-1.615E+04	-81.1	-1.119E+03	5.26
1577	1	-7.345E+04	-5.950E+04	-3.549E+04	-7.56	-893.	27.4
1578	1	-7.181E+04	-6.184E+04	-3.526E+04	20.0	70.8	27.2
1582	1	-1.549E+05	-1.394E+05	-5.905E+04	-278.	554	27.7
1583	1	-1.526E+05	-1.424E+05	-5.961E+04	-43.3	-49.8	200.
1584	1	-1.540E+05	-1.377E+05	-6.042E+04	-52.6	742	261.
1586	1	-1.533E+05	-1.407E+05	-5.889E+04	-45.8	-130	-115
1587	1	-1.535E+05	-1.397E+05	-5.931E+04	-21.3	357.	80.8
1588	1	-1.526E+05	-1.424E+05	-5.935E+04	39.7	-115	68.0
1589	1	-1.543E+05	-1.378E+05	-6.005E+04	-122.	405.	64.6
1590	1	-1.535E+05	-1.410E+05	-5.898E+04	2.97	67.7	-52.6
1591	1	-9.654E+04	-1.570E+05	-1.387E+05	-132.	-8.142E+03	75.9
1592	1	-1.319E+05	-2.584E+05	-2.216E+05	-404.	-2.255E+03	48.7
1593	1	-1.481E+05	-2.594E+05	-2.006E+05	331.	-1.109E+04	-256.
1594	1	-5.923E+04	-5.735E+04	-5.394E+04	-120.	-1.034E+04	251.

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1595	1	-6.590E+04	-8.154E+04	-7.250E+04	27.8	-1.362E+04	473.
1596	1	-9.629E+04	-1.578E+05	-1.385E+05	1.377E+03	-8.056E+03	-131.
1597	1	-1.325E+05	-2.576E+05	-2.213E+05	-361.	-1.971E+03	658.
1598	1	-1.443E+05	-2.634E+05	-2.003E+05	1.462E+03	-1.200E+04	859.
1599	1	-5.859E+04	-5.688E+04	-5.314E+04	219.	-1.001E+04	-746.
1600	1	-6.437E+04	-7.573E+04	-7.092E+04	1.131E+03	-1.277E+04	510.
1601	1	-9.521E+04	-1.584E+05	-1.391E+05	1.029E+03	-8.235E+03	-402.
1602	1	-1.452E+05	-2.617E+05	-1.998E+05	32.7	-1.156E+04	71.4
1603	1	-6.378E+04	-7.896E+04	-7.000E+04	113.	-1.126E+04	866.
1604	1	-1.132E+05	-1.844E+05	-1.344E+05	-79.1	-2.072E+04	329.
1605	1	-1.657E+05	-2.694E+05	-1.883E+05	2.433E+03	-2.364E+04	-190.
1606	1	-1.613E+05	-2.495E+05	-1.607E+05	554.	1.973E+03	-375.
1607	1	-6.473E+04	-9.208E+04	-8.352E+04	839.	-1.474E+04	1.007E+03
1608	1	-1.269E+05	-1.595E+05	-1.319E+05	-65.6	-2.804E+04	269.
1609	1	-1.104E+05	-1.799E+05	-1.322E+05	47.8	-2.098E+04	338.
1610	1	-1.614E+05	-2.723E+05	-1.890E+05	1.602E+03	-2.425E+04	-13.8
1611	1	-1.528E+05	-2.481E+05	-1.587E+05	3.460E+03	657.	-274.
1612	1	-6.583E+04	-9.613E+04	-8.212E+04	835.	-1.317E+04	1.039E+03
1613	1	-1.255E+05	-1.599E+05	-1.301E+05	530.	-2.813E+04	-909.
1614	1	-1.107E+05	-1.840E+05	-1.324E+05	2.007E+03	-2.115E+04	-705.
1615	1	-1.951E+05	-2.499E+05	-1.592E+05	-1.330E+03	1.794E+03	133.
1616	1	-1.228E+05	-1.569E+05	-1.274E+05	548.	-2.533E+04	247.
1617	1	-2.003E+05	-2.463E+05	-1.694E+05	-674.	-2.197E+04	-55.6
1618	1	-1.454E+05	-2.210E+05	-1.232E+05	1.547E+03	3.053E+04	63.5
1620	1	-2.032E+05	-2.515E+05	-1.724E+05	-20.0	-2.171E+04	-1.004E+03
1621	1	-1.449E+05	-2.234E+05	-1.228E+05	-352.	3.064E+04	-553.
1622	1	-1.985E+05	-2.492E+05	-1.723E+05	3.226E+03	-2.098E+04	2.188E+03
1624	1	-4.760E+04	-2.259E+04	-1.930E+04	321.	-4.489E+03	-91.0
1627	1	-4.677E+04	-2.322E+04	-2.104E+04	-654.	2.193E+03	120.
1628	1	-3.578E+04	1.487E+04	1.438E+04	5.531E+03	-2.750E+03	534.
1629	1	-4.543E+04	1.229E+04	1.553E+04	255.	-2.728E+03	-628.
1630	1	-5.643E+04	-6.142E+04	-5.662E+04	-1.347E+03	1.143E+04	-4.320E+03
1631	1	-6.702E+04	-8.991E+04	-7.801E+04	3.151E+03	1.172E+04	4.156E+03
1632	1	-4.592E+04	-2.219E+04	-1.826E+04	3.542E+03	-4.305E+03	1.347E+03
1635	1	-4.387E+04	-2.159E+04	-2.062E+04	4.422E+03	2.410E+03	-2.973E+03
1636	1	-2.616E+04	9.773E+03	1.901E+04	1.240E+04	-1.804E+03	3.801E+03
1637	1	-4.407E+04	-5.073E+03	1.516E+04	7.733E+03	3.497E+03	411.
1638	1	-6.169E+04	-5.472E+04	-5.700E+04	-6.138E+03	6.679E+03	-9.517E+03
1639	1	-4.424E+04	-7.787E+04	-6.719E+04	-1.018E+04	1.532E+04	-1.234E+04
1640	1	-4.168E+04	-2.143E+04	-1.099E+04	6.184E+03	-2.143E+03	2.598E+03
1642	1	-3.609E+04	-3.226E+04	-1.958E+04	3.390E+03	-785.	-1.245E+03
1643	1	-8.920E+04	1.039E+04	2.493E+04	1.495E+04	-4.202E+03	-1.541E+03
1644	1	-8.034E+04	-6.893E+04	-7.691E+04	-1.372E+04	2.762E+03	-1.721E+04
1645	1	-6.537E+04	-4.465E+04	-3.508E+04	67.1	-2.402E+03	-836.
1648	1	-7.058E+04	-5.528E+04	-3.972E+04	4.132E+03	-1.715E+03	3.626E+03
1649	1	-5.928E+04	-1.350E+04	1.815E+04	3.845E+03	-2.194E+03	457.

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1650	1	-7.383E+04	-3.149E+03	1.935E+04	-1.607E+03	-2.822E+03	9.55
1651	1	-6.789E+04	-9.704E+04	-8.264E+04	-5.739E+03	1.443E+04	-6.299E+03
1652	1	-1.242E+05	-1.424E+05	-1.359E+05	-3.112E+04	1.990E+04	-7.642E+03
1653	1	-6.607E+04	-4.895E+04	-3.172E+04	1.190E+03	-1.328E+03	413
1656	1	-6.337E+04	-6.414E+04	-3.264E+04	1.928E+03	1.931E+03	-1.889E+03
1657	1	-4.334E+04	1.083E+03	2.628E+04	9.509E+03	1.685E+03	6.049E+03
1658	1	-6.609E+04	-1.239E+04	2.756E+04	1.350E+04	2.209E+03	1.189E+04
1659	1	-8.204E+04	-9.852E+04	-8.901E+04	-1.923E+04	8.799E+03	-1.656E+04
1660	1	-1.288E+05	-1.414E+05	-1.280E+05	-2.050E+04	2.164E+04	-1.850E+04
1661	1	-5.505E+04	-3.273E+04	-2.098E+04	8.069E+03	-245	3.159E+03
1663	1	-6.053E+04	-4.897E+04	-4.406E+04	-48.7	-2.794E+03	-2.380E+03
1664	1	-4.260E+04	2.639E+03	4.189E+04	1.742E+04	850	7.388E+03
1665	1	-1.324E+05	-1.408E+05	-1.422E+05	-1.760E+04	1.073E+04	-2.043E+04
1678	1	-1.351E+05	-1.118E+05	-1.357E+05	-2.116E+04	1.473E+03	-1.213E+04
1679	1	-1.725E+05	-2.195E+05	-2.144E+05	-6.038E+04	224	-6.674E+03
1680	1	-2.093E+05	-1.907E+05	-1.899E+05	-4.819E+04	4.244E+03	-2.019E+04
1683	1	-1.084E+05	-1.578E+05	-1.374E+05	-3.047E+04	8.231E+03	-6.607E+03
1684	1	-1.430E+05	-2.459E+05	-2.201E+05	-2.690E+04	2.934E+03	-287
1685	1	-1.691E+05	-2.402E+05	-1.894E+05	-5.317E+04	1.137E+04	-7.414E+03
1688	1	-9.151E+04	-1.443E+05	-1.388E+05	-299	8.781E+03	200
1689	1	-1.411E+05	-2.594E+05	-2.087E+05	-5.381E+03	1.064E+04	7.604E+03
1691	1	-1.570E+05	-1.429E+05	-1.302E+05	-3.902E+04	1.224E+04	-1.130E+04
1692	1	-2.012E+05	-2.074E+05	-1.731E+05	-4.525E+04	1.945E+04	-1.158E+04
1693	1	-2.118E+05	-2.331E+05	-1.632E+05	-3.994E+04	6.076E+03	1.188E+04
1696	1	-1.214E+05	-1.604E+05	-1.199E+05	-3.242E+04	1.764E+04	-1.615E+04
1697	1	-1.724E+05	-2.565E+05	-1.821E+05	-3.049E+04	1.963E+04	-9.089E+03
1698	1	-1.732E+05	-2.010E+05	-1.525E+05	-2.154E+04	4.571E+03	-1.178E+03
1701	1	-1.103E+05	-2.009E+05	-1.463E+05	-1.963E+03	1.876E+04	-6.439E+03
1702	1	-1.184E+05	-2.074E+05	-1.599E+05	3.458E+04	8.085E+03	3.303E+03
1704	1	-2.242E+05	-2.402E+05	-1.714E+05	-1.029E+04	1.034E+04	-2.785E+04
1705	1	-1.623E+05	-1.754E+05	-1.229E+05	-1.029E+04	1.845E+04	2.794E+04
1707	1	-2.042E+05	-2.038E+05	-1.710E+05	2.139E+03	1.534E+04	-6.053E+03
1708	1	-1.361E+05	-1.748E+05	-1.347E+05	4.814E+04	-2.214E+04	2.343E+04
1710	1	-1.594E+05	-1.346E+05	-1.590E+05	-3.426E+04	1.807E+04	-248
1711	1	-1.461E+05	-9.885E+04	-1.407E+05	2.693E+04	-3.964E+03	-6.605E+03
1712	1	-2.493E+05	-1.450E+05	-2.040E+05	-1.605E+03	-547	-8.025E+03
1713	1	-2.553E+05	-1.545E+05	-1.900E+05	2.721E+04	-7.364E+03	-1.044E+04
1714	1	-5.044E+04	-5.415E+04	-6.680E+04	6.556E+03	-4.202E+03	-1.281E+04
1715	1	-6.403E+04	-5.993E+04	-8.776E+04	1.688E+04	-4.021E+03	-3.356E+03
1716	1	-1.667E+05	-1.437E+05	-1.472E+05	-3.361E+04	-2.944E+03	-2.073E+04
1717	1	-2.420E+05	-1.908E+05	-2.234E+05	-4.353E+04	47.2	-1.474E+04
1718	1	-2.534E+05	-1.615E+05	-1.868E+05	-2.643E+04	3.888E+03	-2.063E+04
1719	1	-6.187E+04	-6.025E+04	-6.000E+04	-1.115E+03	-3.482E+03	-1.808E+04
1720	1	-7.252E+04	-6.908E+04	-8.111E+04	-302	-1.140E+03	-1.504E+04
1721	1	-1.744E+05	-1.208E+05	-1.348E+05	1.780E+04	-7.794E+03	-1.212E+04
1725	1	-2.572E+05	-1.609E+05	-1.789E+05	1.255E+04	-2.051E+03	-1.526E+04

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1726	1	-2.533E+05	-1.978E+05	-1.678E+05	1.338E+04	295	6.686E+03
1727	1	-8.445E+04	-7.135E+04	-9.985E+04	1.016E+04	-2	861E+03
1728	1	-1.583E+05	-1.354E+05	-1.480E+05	8.390E+03	1	026E+04
1729	1	-1.678E+05	-1.152E+05	-1.346E+05	-5.214E+03	5	313E+03
1730	1	-2.384E+05	-1.875E+05	-1.754E+05	-3.033E+04	1	562E+04
1731	1	-2.289E+05	-1.301E+05	-1.403E+05	-1.314E+04	1	403E+03
1732	1	-9.434E+04	-7.299E+04	-9.866E+04	-1.393E+04	5	338E+03
1733	1	-1.534E+05	-1.402E+05	-1.500E+05	5.865E+03	418	-2.227E+04
1737	1	-2.424E+05	-2.230E+05	-1.734E+05	4.001E+03	-9	674E+03
1738	1	-2.101E+05	-1.682E+05	-1.255E+05	8.348E+03	5	637E+03
1740	1	-2.324E+05	-1.949E+05	-1.694E+05	-6.121E+03	-370	-1.445E+04
1741	1	-1.994E+05	-1.984E+05	-1.259E+05	-3.226E+04	-8	382E+03
1744	1	-1.098E+05	-1.590E+05	-1.515E+05	3.311E+04	-9	967E+03
1745	1	-1.972E+05	-1.844E+05	-2.104E+05	5.341E+04	-3	509E+03
1746	1	-1.828E+05	-2.190E+05	-1.943E+05	5.161E+04	-1	104E+04
1747	1	-5.537E+04	-5.773E+04	-7.938E+04	4.679E+03	-1	001E+04
1748	1	-5.906E+04	-7.489E+04	-9.073E+04	1.594E+04	-1	123E+04
1749	1	-1.465E+05	-1.126E+05	-1.477E+05	2.280E+04	-7	261E+03
1750	1	-2.360E+05	-1.432E+05	-2.051E+05	5.280E+04	-2	911E+03
1751	1	-2.293E+05	-1.798E+05	-1.952E+05	5.637E+04	-9	045E+03
1752	1	-5.015E+04	-4.604E+04	-7.410E+04	5.742E+03	-7	182E+03
1753	1	-7.521E+04	-5.053E+04	-8.915E+04	4.096E+03	-9	707E+03
1757	1	-1.291E+05	-1.492E+05	-1.411E+05	3.537E+04	-2	200E+04
1758	1	-2.193E+05	-2.132E+05	-1.900E+05	4.873E+04	-2	025E+04
1759	1	-1.850E+05	-2.117E+05	-1.559E+05	4.143E+04	2	579E+03
1760	1	-7.759E+04	-7.457E+04	-1.042E+05	1.837E+04	-1	377E+04
1761	1	-1.326E+05	-1.378E+05	-1.527E+05	1.503E+04	-2	366E+04
1762	1	-1.573E+05	-1.251E+05	-1.375E+05	3.512E+04	-1	543E+04
1763	1	-2.614E+05	-1.949E+05	-1.938E+05	2.644E+04	-1	344E+04
1764	1	-2.091E+05	-1.719E+05	-1.514E+05	4.284E+04	417	3.204E+03
1765	1	-8.452E+04	-6.810E+04	-9.909E+04	1.742E+04	-1	090E+04
1766	1	-1.579E+05	-1.347E+05	-1.539E+05	1.998E+04	-2	024E+04
1770	1	-2.195E+05	-2.236E+05	-1.785E+05	2.043E+04	-2	390E+04
1771	1	-1.703E+05	-1.659E+05	-1.110E+05	3.215E+04	2	939E+04
1773	1	-2.327E+05	-2.052E+05	-1.750E+05	2.191E+04	-1	505E+04
1774	1	-2.060E+05	-1.590E+05	-1.194E+05	1.230E+04	1	338E+04
1777	1	-9.364E+04	-1.595E+05	-1.534E+05	-0.918	-1	076E+04
1778	1	-1.354E+05	-2.574E+05	-2.287E+05	2.071E+04	-2	905E+03
1779	1	-1.452E+05	-2.638E+05	-2.039E+05	982	-1	470E+04
1780	1	-5.529E+04	-5.801E+04	-7.609E+04	752	-1	433E+04
1781	1	-4.128E+04	-7.825E+04	-9.583E+04	-130	-1	866E+04
1782	1	-1.005E+05	-1.558E+05	-1.525E+05	2.187E+04	-2	187E+04
1783	1	-1.553E+05	-2.380E+05	-2.219E+05	5.115E+04	-3	475E+03
1784	1	-1.568E+05	-2.511E+05	-2.019E+05	3.656E+04	-1	538E+04
1785	1	-5.515E+04	-4.440E+04	-7.681E+04	5.791E+03	-1	278E+04
1786	1	-6.066E+04	-7.888E+04	-9.528E+04	6.547E+03	-1	745E+04

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1790	1	-1.088E+05	-1.787E+05	-1.423E+05	36.4	-2.548E+04	-47.8
1791	1	-1.736E+05	-2.646E+05	-1.897E+05	1.573E+04	-2.909E+04	-3.018E+03
1792	1	-1.529E+05	-2.407E+05	-1.541E+05	985	4.711E+03	-12.5
1793	1	-6.157E+04	-9.359E+04	-1.099E+05	5.458E+03	-1.980E+04	-1.283E+03
1794	1	-1.288E+05	-1.632E+05	-1.632E+05	429	-3.510E+04	-8.60
1795	1	-1.161E+05	-1.737E+05	-1.433E+05	2.169E+04	-2.501E+04	-5.207E+03
1796	1	-1.913E+05	-2.461E+05	-1.913E+05	3.978E+04	-2.670E+04	-6.880E+03
1797	1	-1.613E+05	-2.290E+05	-1.541E+05	2.561E+04	3.445E+03	2.732E+03
1798	1	-6.595E+04	-8.490E+04	-1.065E+05	1.319E+04	-1.659E+04	-3.864E+03
1799	1	-1.286E+05	-1.610E+05	-1.605E+05	1.177E+04	-3.381E+04	-8.303E+03
1800	1	-1.999E+05	-2.416E+05	-1.773E+05	-411	-2.741E+04	109
1801	1	-1.386E+05	-2.021E+05	-1.104E+05	1.039E+04	4.161E+04	6.097E+03
1802	1	-2.071E+05	-2.374E+05	-1.784E+05	1.396E+04	-2.649E+04	-7.138E+03
1803	1	-1.512E+05	-1.887E+05	-1.095E+05	2.696E+04	3.673E+04	1.709E+04
1804	1	-4.323E+04	-2.056E+04	-4.311E+04	88.6	-3.750E+03	-8.82
1805	1	-3.414E+04	1.066E+04	-1.002E+04	-3.775E+03	3.247E+03	1.122E+03
1806	1	-4.028E+04	7.597E+03	-1.429E+04	104	6.949E+03	-39.0
1807	1	-4.170E+04	-1.949E+04	-3.855E+04	-3.532E+03	-2.599E+03	-77.3
1808	1	-2.574E+04	8.148E+03	-4.942E+03	-1.104E+04	3.075E+03	2.487E+03
1809	1	-3.813E+04	8.171E+03	-9.269E+03	-9.161E+03	6.834E+03	3.507E+03
1810	1	-3.172E+04	-1.579E+04	-3.061E+04	-6.019E+03	-952	824
1811	1	-2.531E+04	2.634E+03	-1.404E+03	-1.462E+04	4.864E+03	2.781E+03
1812	1	-5.791E+04	-4.612E+04	-6.803E+04	563	-2.019E+03	-74.6
1813	1	-4.345E+04	7.223E+03	-8.440E+03	-4.982E+03	9.876E+03	1.838E+03
1814	1	-5.549E+04	3.602E+03	-8.216E+03	198	5.806E+03	-129
1815	1	-5.522E+04	-4.041E+04	-6.119E+04	-950	-156	1.823E+03
1816	1	-3.222E+04	7.644E+03	-1.513E+03	-1.275E+04	7.524E+03	4.299E+03
1817	1	-4.970E+04	9.008E+03	180	-1.211E+04	6.123E+03	3.320E+03
1818	1	-4.718E+04	-2.994E+04	-4.495E+04	-6.072E+03	3.833E+03	3.178E+03
1819	1	-2.945E+04	8.562E+03	1.328E+04	-1.885E+04	3.616E+03	3.573E+03
1820	1	-3.132E+04	-3.381E+03	-1.403E+04	50.4	341	59.0
1821	1	-2.049E+04	-1.030E+04	-1.656E+04	-90.3	-708	-6.61
1822	1	-2.302E+04	-9.463E+03	-1.389E+04	-244	-1.965E+03	-70.5
1823	1	-2.280E+04	-9.197E+03	-1.406E+04	-157	-2.665E+03	9.12
1824	1	-1.834E+04	-1.230E+04	-1.880E+04	178	83.9	-42.9
1825	1	-1.805E+04	-1.211E+04	-1.839E+04	95.4	-79.4	-19.5
1826	1	-2.921E+04	-4.627E+03	-1.334E+04	-3.731E+03	-102	706
1827	1	-2.012E+04	-1.057E+04	-1.667E+04	-385	-705	-38.3
1828	1	-2.220E+04	-9.484E+03	-1.424E+04	-728	-2.049E+03	-170
1829	1	-2.277E+04	-1.004E+04	-1.488E+04	-311	-2.784E+03	-306
1830	1	-1.817E+04	-1.215E+04	-1.882E+04	44.4	18.0	-113
1831	1	-1.843E+04	-1.202E+04	-1.853E+04	269	164	-108
1832	1	-2.601E+04	-8.755E+03	-1.327E+04	-4.588E+03	-1.021E+03	724
1833	1	-1.949E+04	-1.088E+04	-1.682E+04	-437	-790	-51.3
1834	1	-2.169E+04	-9.540E+03	-1.521E+04	-792	-2.438E+03	-304
1835	1	-1.827E+04	-1.264E+04	-1.892E+04	2.40	97.4	-230

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1864	1	-3	465E+04	-3	574E+03	-1	266E+04	-36	0	206	-35	7	
1867	1	-2	130E+04	-1	070E+04	-1	703E+04	-66	7	-1	251E+03	9	36
1868	1	-2	237E+04	-9	482E+03	-1	437E+04	-197		-3	297E+03	-158	
1869	1	-2	243E+04	-9	007E+03	-1	437E+04	-108		-3	331E+03	58	0
1870	1	-1	862E+04	-1	248E+04	-1	881E+04	190		22	4	-85	8
1871	1	-1	842E+04	-1	254E+04	-1	885E+04	106		-56	4	-43	9
1872	1	-3	172E+04	-4	279E+03	-1	131E+04	-4	350E+03	-759		877	
1875	1	-2	095E+04	-1	104E+04	-1	721E+04	-379		-1	095E+03	-93	4
1876	1	-2	185E+04	-9	640E+03	-1	517E+04	-486		-3	011E+03	-467	
1877	1	-2	225E+04	-1	034E+04	-1	530E+04	-91	6	-3	337E+03	-440	
1878	1	-1	853E+04	-1	233E+04	-1	877E+04	218		224		-114	
1879	1	-1	883E+04	-1	211E+04	-1	879E+04	351		81	5	-155	
1880	1	-2	732E+04	-8	633E+03	-1	140E+04	-5	295E+03	-2	072E+03	1	007E+03
1882	1	-2	030E+04	-1	125E+04	-1	739E+04	-470		-1	124E+03	-177	
1883	1	-2	155E+04	-9	221E+03	-1	582E+04	-490		-2	614E+03	-303	
1884	1	-1	869E+04	-1	310E+04	-1	925E+04	-0	999	-102		-190	
1898	1	-1	328E+05	-2	598E+05	-2	215E+05	-67	5	-2	143E+03	366	
1900	1	-5	631E+04	-5	398E+04	-5	208E+04	641		-9	388E+03	-264	
1902	1	-9	512E+04	-1	599E+05	-1	398E+05	1	298E+03	-7	774E+03	180	
1903	1	-1	328E+05	-2	594E+05	-2	215E+05	-386		-2	170E+03	53	0
1904	1	-1	457E+05	-2	638E+05	-2	007E+05	306		-1	149E+04	152	
1905	1	-5	574E+04	-5	453E+04	-5	147E+04	216		-8	744E+03	310	
1906	1	-6	224E+04	-7	575E+04	-6	829E+04	824		-1	099E+04	84	1
1907	1	-9	362E+04	-1	592E+05	-1	388E+05	275		-7	980E+03	-78	6
1908	1	-1	463E+05	-2	655E+05	-2	014E+05	-397		-1	166E+04	-45	7
1909	1	-6	067E+04	-7	310E+04	-6	624E+04	5	44	-1	028E+04	324	
1911	1	-1	655E+05	-2	730E+05	-1	911E+05	6	83	-2	353E+04	379	
1913	1	-6	247E+04	-9	211E+04	-7	717E+04	1	213E+03	-1	165E+04	-681	
1915	1	-1	094E+05	-1	830E+05	-1	327E+05	1	092E+03	-2	132E+04	-35	8
1916	1	-1	643E+05	-2	743E+05	-1	910E+05	583		-2	392E+04	-57	6
1917	1	-1	559E+05	-2	499E+05	-1	587E+05	-1	424E+03	982		-240	
1918	1	-6	240E+04	-8	996E+04	-7	710E+04	89	2	-1	042E+04	77	6
1919	1	-1	232E+05	-1	585E+05	-1	286E+05	1	161E+03	-2	407E+04	182	
1920	1	-1	079E+05	-1	835E+05	-1	325E+05	453		-2	111E+04	137	
1921	1	-1	601E+05	-2	538E+05	-1	610E+05	-297		1	154E+03	0	912
1922	1	-1	194E+05	-1	524E+05	-1	239E+05	-682		-2	332E+04	14	6
1924	1	-1	444E+05	-2	230E+05	-1	199E+05	-1	529E+03	3	011E+04	-1	440E+03
1926	1	-2	027E+05	-2	554E+05	-1	742E+05	3	192E+03	-2	215E+04	-111	
1927	1	-1	478E+05	-2	217E+05	-1	195E+05	-2	211E+03	3	032E+04	214	
1929	1	-1	990E+05	-2	536E+05	-1	725E+05	423		-2	144E+04	-77	1
1934	1	-2	091E+04	-3	800E+03	-2	278E+04	1	118E+04	-805		2	237E+03
1936	1	-3	567E+04	-5	293E+04	-4	104E+04	478		-1	898E+03	-7	036E+03
1938	1	-3	670E+04	-2	194E+04	-7	138E+03	3	892E+03	-1	469E+03	294	
1941	1	-1	066E+04	-2	904E+04	882		8	182E+03	-5	368E+03	-3	553E+03
1942	1	-1	519E+04	-8	451E+03	2	377E+04	5	173E+03	-1	588E+03	-284	
1943	1	-2	049E+04	-2	249E+03	2	895E+04	9	523E+03	-274		1	759E+03

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1944	1	6.810E+03	-3.617E+04	-8.674E+03	1.742E+03	-5.447E+03	-3.201E+03
1945	1	-1.644E+04	-4.845E+04	-2.983E+04	3.962E+03	-7.202E+03	-2.715E+03
1946	1	-3.572E+04	-2.414E+04	-6.892E+03	169	-1.067E+03	2.86
1948	1	2.576E+03	-2.883E+04	5.109E+03	90.4	-4.963E+03	357.
1949	1	-1.563E+04	-1.036E+04	2.880E+04	786	-2.192E+03	-394.
1950	1	1.049E+04	-4.085E+04	-5.338E+03	640	-5.755E+03	761.
1955	1	-3.099E+04	9.505E+03	3.122E+04	1.272E+04	-1.128E+03	6.572E+03
1957	1	-6.032E+04	-6.114E+04	-6.860E+04	-5.673E+03	-3.921E+03	-9.008E+03
1959	1	-4.839E+04	-3.801E+04	-1.779E+04	3.905E+03	1.084E+03	756
1962	1	-2.507E+04	-3.514E+04	-8.448E+03	8.146E+03	-7.674E+03	4.391E+03
1963	1	-2.085E+04	-4.489E+03	3.573E+04	5.648E+03	-1.721E+03	1.448E+03
1964	1	-2.979E+04	-1.716E+03	4.472E+04	1.165E+04	-2.216E+03	2.911E+03
1965	1	-1.097E+04	-5.436E+04	-2.155E+04	1.923E+03	-7.430E+03	2.628E+03
1966	1	-4.294E+04	-7.328E+04	-4.024E+04	5.139E+03	-7.664E+03	563.
1967	1	-4.622E+04	-3.778E+04	-1.394E+04	294	1.442E+03	-363.
1969	1	-1.776E+03	-4.027E+04	1.117E+04	-9.61	-8.348E+03	613.
1970	1	-2.044E+04	-6.444E+03	4.514E+04	1.377E+03	-3.042E+03	160.
1971	1	-4.935E+03	-6.914E+04	-4.344E+03	1.750E+03	-4.723E+03	1.540E+03
1988	1	-2.461E+04	-1.120E+04	-3.561E+04	829	-8.138E+03	-1.509E+04
1990	1	-9.397E+03	-3.171E+04	-3.899E+04	1.257E+04	-2.470E+03	-1.483E+03
1992	1	-348	-2.732E+04	-2.015E+04	68.1	-4.521E+03	-7.485E+03
1995	1	4.050E+03	-1.856E+04	-1.860E+04	5.081E+03	-3.639E+03	-2.301E+03
1996	1	7.216E+03	-2.317E+04	-1.184E+04	2.108E+03	-3.151E+03	-483.
1997	1	-1.031E+04	-3.026E+04	-3.019E+04	6.581E+03	-5.612E+03	6.365E+03
1998	1	832	-2.434E+04	-9.545E+03	-2.239E+03	-46.1	1.558E+03
1999	1	1.084E+03	-3.358E+04	-1.562E+04	-1.078E+03	2.448E+03	8.010E+03
2000	1	1.242E+04	-2.815E+04	-4.193E+03	470	-3.356E+03	946.
2002	1	6.869E+03	-2.360E+04	-2.632E+03	-1.395E+03	10.8	1.413E+03
2003	1	1.202E+04	-3.352E+04	-1.310E+03	-822	152	1.779E+03
2004	1	-1.967E+03	-2.689E+04	-1.201E+03	-1.162E+03	1.997E+03	1.082E+03
2009	1	-4.601E+04	-4.859E+04	-6.413E+04	1.635E+04	-757	7.409E+03
2011	1	-5.228E+04	-6.134E+04	-6.547E+04	1.881E+03	-1.589E+03	-380
2013	1	-2.455E+04	-5.008E+04	-3.538E+04	7.355E+03	-8.143E+03	1.081E+04
2016	1	-1.199E+04	-4.917E+04	-2.276E+04	1.601E+03	1.210E+03	1.637E+04
2017	1	-6.808E+03	-5.009E+04	-1.422E+04	3.157E+03	-1.261E+03	6.105E+03
2018	1	-3.532E+04	-7.990E+04	-3.304E+04	7.556E+03	-4.843E+03	5.930E+03
2019	1	-3.567E+03	-3.828E+04	-3.901E+03	-3.112E+03	3.468E+03	6.585E+03
2020	1	-1.361E+04	-5.815E+04	-1.362E+04	-4.525E+03	-325	8.174E+03
2021	1	8.001E+03	-4.615E+04	2.136E+03	-552	-2.734E+03	989.
2023	1	5.110E+03	-3.591E+04	5.547E+03	-924	1.563E+03	1.182E+03
2024	1	7.554E+03	-5.490E+04	6.094E+03	-1.328E+03	-1.500E+03	1.384E+03
2025	1	489.	-3.470E+04	1.317E+04	-1.917E+03	2.039E+03	2.976E+03
2042	1	-2.610E+04	-7.647E+03	-3.607E+04	-9.057E+03	-2.318E+03	57.6
2044	1	-1.577E+04	-1.496E+04	-2.897E+04	7.578E+03	-1.988E+03	1.832E+03
2046	1	3.597E+03	-2.281E+04	-1.320E+04	-7.745E+03	21.1	2.268E+03
2049	1	-7.192E+03	-4.689E+03	-7.487E+03	-8.965E+03	1.381E+03	2.806E+03

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2050	1	-8	903E+03	-1	908E+04	-7	511E+03	-3	020E+03	539	1	464E+03			
2051	1	-3	258E+03	-1	891E+04	-6	726E+03	-1	213E+04	4	274E+03	8	377E+03		
2052	1	-2	094E+04	-1	277E+04	-9	074E+03	-5	910E+03	94	0	1	574E+03		
2053	1	-1	936E+04	-4	556E+03	-1	012E+03	-1	260E+04	6	036E+03	5	448E+03		
2054	1	-6	924E+03	-1	950E+04	-2	115E+03	314		692	11	9			
2056	1	-1	501E+04	-1	770E+04	-3	020E+03	-746		-313	-137				
2057	1	-1	650E+04	-2	050E+04	-4	147E+03	1	247E+03	454	-10	2			
2058	1	-1	705E+04	-1	558E+04	-4	239E+03	-366		-2	181E+03	746			
2063	1	-4	928E+04	-5	026E+04	-5	929E+04	1	250E+03	-1	405E+03	5	692E+03		
2065	1	-4	183E+04	-3	853E+04	-4	768E+04	-4	050E+03	4	017E+03	6	859E+03		
2067	1	-7	093E+03	-3	215E+04	-5	778E+03	-9	585E+03	6	894E+03	1	654E+04		
2070	1	-1	143E+04	-1	311E+04	-2	759E+03	-1	529E+04	8	770E+03	1	214E+04		
2071	1	-1	343E+04	-2	256E+04	-1	678E+03	-7	295E+03	1	880E+03	4	777E+03		
2072	1	-1	363E+04	-3	431E+04	900		-1	983E+04	2	824E+03	1	114E+04		
2073	1	-2	256E+04	-1	658E+04	-3	948E+03	-5	304E+03	633	3	424E+03	7	529E+03	
2074	1	-1	825E+04	-7	046E+03	1	101E+04	-1	911E+04	4	546E+03	1	315E+03		
2075	1	-8	188E+03	-2	393E+04	3	267E+03	-210		574	1	712E+03	733		
2077	1	-1	772E+04	-1	893E+04	-2	759E+03	1	280E+03	-1	712E+03	733			
2078	1	-1	802E+04	-2	045E+04	3	931E+03	-2	21	-227	1	435E+03	336		
2079	1	-1	348E+04	-1	480E+04	210		1	917E+03	-3	189E+03	2	309E+03	2	989E+03
2095	1	-2	584E+04	-8	313E+03	-8	781E+03	-1	035E+04	739					
2097	1	-1	724E+04	-1	255E+04	-9	238E+03	-7	382E+03	487					
2100	1	-2	076E+04	-1	149E+04	-7	554E+03	-2	624E+03	-1	742E+03	719			
2101	1	-2	251E+04	-1	189E+04	-7	367E+03	-6	988E+03	-2	514E+03	1	795E+03		
2102	1	-2	002E+04	-1	345E+04	-5	857E+03	-972		-1	211E+03	27	0		
2104	1	-2	344E+04	-1	355E+04	-8	096E+03	-84	4	-1	942E+03	-287			
2108	1	-2	955E+04	-6	448E+03	-3	519E+03	-1	302E+04	1	755E+03	3	103E+03		
2110	1	-2	034E+04	-1	175E+04	-596		-1	201E+04	2	261E+03	6	427E+03		
2113	1	-2	121E+04	-1	174E+04	-5	784E+03	-3	211E+03	-3	045E+03	713			
2114	1	-2	320E+04	-1	249E+04	-6	112E+03	-8	058E+03	-3	538E+03	1	429E+03		
2115	1	-2	097E+04	-1	528E+04	-6	246E+03	425		-2	743E+03	102			
2117	1	-2	804E+04	-1	524E+04	-8	400E+03	-0	756	-3	127E+03	-290			
2129	1	-2	129E+04	-1	028E+04	-1	531E+04	-793		-2	001E+03	-179			
2131	1	-1	803E+04	-1	249E+04	-1	886E+04	-3	64	95	1	-116			
2133	1	-2	208E+04	-9	810E+03	-1	155E+04	-2	871E+03	-1	844E+03	413			
2136	1	-1	911E+04	-1	163E+04	-1	743E+04	-380		-849	-35	5			
2137	1	-2	033E+04	-1	043E+04	-1	569E+04	-218		-2	013E+03	-93	1		
2138	1	-2	086E+04	-1	068E+04	-1	591E+04	-413		-2	360E+03	-205			
2139	1	-1	781E+04	-1	241E+04	-1	883E+04	93	6	120	-47	7			
2140	1	-1	815E+04	-1	246E+04	-1	891E+04	172		86	0	-155			
2141	1	-2	118E+04	-1	106E+04	-1	189E+04	109		-2	195E+03	20	4		
2143	1	-1	874E+04	-1	172E+04	-1	741E+04	-89	2	-863	1	43			
2144	1	-2	097E+04	-1	090E+04	-1	642E+04	-69	1	-2	293E+03	50	4		
2145	1	-1	812E+04	-1	261E+04	-1	907E+04	32	6	229	-59	5			
2150	1	-2	145E+04	-1	056E+04	-1	615E+04	-485		-2	654E+03	-343			
2152	1	-1	852E+04	-1	265E+04	-1	906E+04	189		35	3	-143			



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2154	1	-2	319E+04	-1	044E+04	-1	157E+04	-2	899E+03	-2	896E+03	61	8
2157	1	-1	959E+04	-1	177E+04	-1	765E+04	-471	-1	045E+03	-32	6	
2158	1	-2	096E+04	-1	051E+04	-1	624E+04	-93.0	-2	639E+03	-168		
2159	1	-2	110E+04	-1	086E+04	-1	671E+04	-358	-2	901E+03	-274		
2160	1	-1	852E+04	-1	273E+04	-1	929E+04	87.7	84.1	-91	2		
2161	1	-1	869E+04	-1	276E+04	-1	939E+04	282	-219	-180			
2162	1	-2	173E+04	-1	080E+04	-1	131E+04	-106	-3	096E+03	-108		
2164	1	-1	937E+04	-1	207E+04	-1	785E+04	-56.6	-1	069E+03	31	7	
2165	1	-2	125E+04	-1	109E+04	-1	698E+04	0.102	-2	726E+03	47	3	
2166	1	-1	871E+04	-1	276E+04	-1	943E+04	43.2	71.3	-63	6		
2179	1	-9	877E+04	-1	494E+05	-1	373E+05	374	2	265E+03	-88	2	
2180	1	-1	335E+05	-2	522E+05	-2	301E+05	296	3	633E+03	26	3	
2181	1	-1	339E+05	-2	517E+05	-2	316E+05	-105	3	337E+03	40	0	
2182	1	-6	198E+04	-4	724E+04	-4	377E+04	-24.1	1	002E+03	-125		
2183	1	-6	197E+04	-4	839E+04	-4	530E+04	207	710	-10	8		
2184	1	-9	782E+04	-1	486E+05	-1	366E+05	878	2	135E+03	-96	7	
2185	1	-1	332E+05	-2	533E+05	-2	305E+05	81.6	3	687E+03	-62	9	
2186	1	-1	335E+05	-2	526E+05	-2	318E+05	220	3	380E+03	-84	5	
2187	1	-6	199E+04	-4	619E+04	-4	204E+04	409	888	-414			
2188	1	-6	206E+04	-4	671E+04	-4	419E+04	425	739	-58	8		
2189	1	-9	646E+04	-1	491E+05	-1	361E+05	1	617E+03	2	091E+03	-135	
2190	1	-1	346E+05	-2	543E+05	-2	327E+05	164	3	442E+03	-95	4	
2191	1	-5	991E+04	-4	269E+04	-4	038E+04	-14.2	947	-21	4		
2192	1	-9	842E+04	-1	472E+05	-1	392E+05	-184	1	828E+03	-1	26	
2193	1	-1	346E+05	-2	522E+05	-2	333E+05	-52.6	2	840E+03	-39	2	
2194	1	-1	338E+05	-2	516E+05	-2	347E+05	194	2	813E+03	4	91	
2195	1	-6	193E+04	-4	640E+04	-4	566E+04	-391	675	-4	83		
2196	1	-6	242E+04	-4	655E+04	-4	703E+04	-229	740	-5	37		
2197	1	-9	857E+04	-1	480E+05	-1	395E+05	1	098E+03	1	836E+03	-16	2
2198	1	-1	352E+05	-2	527E+05	-2	336E+05	101	2	852E+03	36	0	
2199	1	-1	339E+05	-2	518E+05	-2	348E+05	48.3	2	643E+03	44	4	
2200	1	-6	096E+04	-4	392E+04	-4	358E+04	-693	596	-44	8		
2201	1	-6	219E+04	-4	537E+04	-4	593E+04	-696	720	-84	8		
2202	1	-9	743E+04	-1	487E+05	-1	393E+05	1	031E+03	1	735E+03	14	2
2203	1	-1	345E+05	-2	528E+05	-2	354E+05	489	2	634E+03	24	3	
2204	1	-6	075E+04	-4	205E+04	-4	253E+04	-682	717	-110			
2205	1	-9	874E+04	-1	460E+05	-1	423E+05	-13.9	2	523E+03	9	39	
2206	1	-1	354E+05	-2	521E+05	-2	393E+05	204	3	638E+03	-24	6	
2207	1	-1	360E+05	-2	556E+05	-2	329E+05	142	2	052E+03	-15	1	
2208	1	-6	108E+04	-4	340E+04	-4	571E+04	-488	790	44	0		
2209	1	-6	004E+04	-4	941E+04	-4	954E+04	-204	-4	410E+03	3	67	
2210	1	-9	858E+04	-1	462E+05	-1	423E+05	836	2	539E+03	19	4	
2211	1	-1	353E+05	-2	527E+05	-2	396E+05	222	3	560E+03	-68	5	
2212	1	-1	363E+05	-2	557E+05	-2	330E+05	-233	2	276E+03	-56	6	
2213	1	-6	085E+04	-4	154E+04	-4	370E+04	-957	784	121			
2214	1	-6	009E+04	-4	860E+04	-4	878E+04	-481	-4	341E+03	161		

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2215	1	-9	748E+04	-1	468E+05	-1	418E+05	1	028E+03	2	564E+03	29	9
2216	1	-1	373E+05	-2	569E+05	-2	337E+05	412	2	239E+03	-74	2	
2217	1	-5	802E+04	-4	529E+04	-4	545E+04	-465	-3	979E+03	362		
2225	1	-5	480E+04	-1	586E+04	-9	612E+03	-1	033E+03	1	925E+03	222	
2228	1	-6	608E+04	-2	743E+04	-1	718E+04	6	934E+03	4	996E+03	-1	972E+03
2229	1	-4	817E+04	1	240E+04	2	467E+04	8	191E+03	3	101E+03	-1	165E+03
2230	1	-5	044E+04	1	872E+04	2	457E+04	-229	2	576E+03	74	9	
2231	1	-6	021E+04	-5	801E+04	-4	904E+04	-8	096E+03	-2	120E+03	1	438E+03
2232	1	-6	200E+04	-5	384E+04	-5	308E+04	4	490E+03	3	854E+03	-2	548E+03
2233	1	-5	242E+04	-1	925E+04	-8	227E+03	5	564E+03	1	450E+03	-889	
2236	1	-4	375E+04	-2	276E+04	-9	190E+03	3	902E+03	-1	532E+03	1	222E+03
2237	1	-3	349E+04	676	2	637E+04	1	447E+04	172	-1	432E+03		
2238	1	-4	277E+04	8	031E+03	2	450E+04	1	511E+04	1	326E+03	-1	629E+03
2239	1	-5	245E+04	-3	824E+04	-4	227E+04	-3	812E+03	-156	1	067E+04	
2240	1	-5	445E+04	-4	733E+04	-4	030E+04	-765	-2	619E+03	3	520E+03	
2241	1	-4	677E+04	-2	217E+04	-4	866E+03	6	834E+03	588	-860		
2243	1	-3	683E+04	-2	478E+04	-1	065E+04	5	134E+03	1	279E+03	5	444E+03
2244	1	-3	705E+04	-2	588E+03	2	722E+04	1	574E+04	-316	-457		
2245	1	-5	445E+04	-5	617E+04	-4	737E+04	4	544E+03	4	300E+03	5	474E+03
2246	1	-5	469E+04	-1	819E+04	-1	228E+04	614	1	015E+03	-29	2	
2249	1	-5	468E+04	-1	147E+04	-1	081E+04	-1	143E+03	585	-48	7	
2250	1	-4	479E+04	1	325E+04	2	441E+04	6	672E+03	1	222E+03	-350	
2251	1	-4	610E+04	1	835E+04	2	387E+04	603	738	5	91		
2252	1	-6	302E+04	-4	702E+04	-4	790E+04	2	903E+03	1	192E+03	-339	
2253	1	-6	529E+04	-4	304E+04	-4	792E+04	-225	-190	164			
2254	1	-5	183E+04	-1	750E+04	-9	555E+03	4	030E+03	890	-310		
2257	1	-5	085E+04	-2	163E+04	-1	154E+04	1	082E+04	1	050E+03	-734	
2258	1	-3	503E+04	5	356E+03	2	622E+04	1	581E+04	806	-808		
2259	1	-3	979E+04	1	385E+04	2	549E+04	1	274E+04	723	-192		
2260	1	-5	511E+04	-5	815E+04	-4	837E+04	5	677E+03	2	574E+03	5	41
2261	1	-6	005E+04	-5	164E+04	-4	993E+04	6	267E+03	444	42	3	
2262	1	-4	732E+04	-1	883E+04	-5	413E+03	6	771E+03	711	-474		
2264	1	-3	850E+04	-3	812E+04	-1	438E+04	1	174E+04	1	564E+03	369	
2265	1	-2	710E+04	-259	2	554E+04	1	765E+04	578	-263			
2266	1	-5	120E+04	-6	305E+04	-5	374E+04	5	434E+03	703	-23	4	
2267	1	-5	184E+04	-1	462E+04	-1	153E+04	174	101	-103			
2270	1	-5	461E+04	-9	991E+03	-1	168E+04	392	794	103			
2271	1	-4	197E+04	1	722E+04	2	472E+04	6	603E+03	466	-1	76	
2272	1	-4	209E+04	1	790E+04	1	963E+04	399	-1	378E+03	62	7	
2273	1	-5	951E+04	-4	323E+04	-4	758E+04	3	235E+03	-313	286		
2274	1	-5	940E+04	-4	940E+04	-5	179E+04	5	95	5	999E+03	-176	
2275	1	-4	958E+04	-1	486E+04	-9	384E+03	3	648E+03	139	60	3	
2278	1	-4	780E+04	-1	878E+04	-1	235E+04	1	056E+04	458	34	8	
2279	1	-3	200E+04	8	290E+03	2	552E+04	1	560E+04	576	-397		
2280	1	-3	552E+04	1	464E+04	2	180E+04	1	199E+04	-623	967		
2281	1	-5	012E+04	-5	390E+04	-4	949E+04	7	945E+03	-346	1	458E+03	

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2282	1	-5.641E+04	-5.168E+04	-5.041E+04	1.725E+03	3.997E+03	-2.866E+03
2283	1	-4.547E+04	-1.633E+04	-6.734E+03	6.196E+03	126	-66.4
2285	1	-3.489E+04	-3.271E+04	-1.553E+04	1.325E+04	910	286.
2286	1	-2.399E+04	1.546E+03	2.345E+04	1.605E+04	116	886.
2287	1	-5.355E+04	-5.630E+04	-5.531E+04	3.711E+03	-634	-6.644E+03
2301	1	-1.314E+05	-9.825E+04	-1.361E+05	-2.643E+04	4.930E+03	9.687E+03
2302	1	-2.191E+05	-1.749E+05	-2.224E+05	-5.226E+04	4.339E+03	1.580E+04
2303	1	-9.979E+04	-1.123E+05	-1.265E+05	-3.020E+04	3.511E+03	6.468E+03
2304	1	-1.317E+05	-1.886E+05	-2.085E+05	-2.270E+04	1.798E+03	2.985E+04
2307	1	-1.655E+05	-2.343E+05	-2.275E+05	-5.695E+04	-82.6	1.074E+04
2310	1	-9.479E+04	-1.283E+05	-1.307E+05	-6.495E+03	5.602E+03	1.486E+04
2311	1	-1.350E+05	-2.451E+05	-2.412E+05	7.308E+03	-3.247E+03	-1.043E+04
2313	1	-1.326E+05	-1.125E+05	-1.404E+05	-2.443E+04	2.041E+03	2.374E+03
2314	1	-1.925E+05	-2.028E+05	-2.423E+05	-5.787E+04	-1.625E+03	-947.
2315	1	-2.169E+05	-1.648E+05	-2.385E+05	-5.772E+04	-140	3.242E+03
2318	1	-1.113E+05	-1.396E+05	-1.457E+05	-2.349E+04	291	-4.306E+03
2319	1	-1.382E+05	-2.353E+05	-2.361E+05	-2.994E+04	-3.474E+03	-24.1
2320	1	-1.372E+05	-2.212E+05	-2.351E+05	-5.400E+04	-2.969E+03	3.283E+03
2323	1	-9.511E+04	-1.446E+05	-1.417E+05	-5.934E+03	-2.609E+03	4.455E+03
2324	1	-1.301E+05	-2.623E+05	-2.389E+05	-4.590E+03	-1.314E+03	2.190E+03
2326	1	-1.316E+05	-1.123E+05	-1.461E+05	-2.666E+04	-2.040E+03	2.593E+03
2327	1	-1.957E+05	-1.966E+05	-2.446E+05	-5.612E+04	-3.175E+03	153
2328	1	-2.172E+05	-1.807E+05	-2.355E+05	-5.201E+04	-1.909E+03	2.174E+03
2331	1	-1.101E+05	-1.337E+05	-1.450E+05	-2.292E+04	-2.634E+03	53.1
2332	1	-1.456E+05	-2.420E+05	-2.414E+05	-2.729E+04	-4.395E+03	-1.464E+03
2333	1	-1.639E+05	-2.386E+05	-2.349E+05	-5.495E+04	-1.574E+03	2.314E+03
2336	1	-9.578E+04	-1.510E+05	-1.439E+05	-222.	-2.574E+03	-1.229E+03
2337	1	-1.303E+05	-2.482E+05	-2.290E+05	-750.	-1.714E+03	-652.
2346	1	-1.524E+05	-1.032E+05	-1.484E+05	1.777E+04	7.186E+03	316.
2347	1	-2.563E+05	-1.357E+05	-2.399E+05	7.778E+03	6.553E+03	3.703E+03
2348	1	-2.952E+05	-1.402E+05	-2.440E+05	3.056E+04	6.923E+03	2.116E+03
2349	1	-4.953E+04	-6.329E+04	-5.468E+04	7.201E+03	8.445E+03	995
2350	1	-4.938E+04	-6.571E+04	-5.882E+04	3.573E+03	6.738E+03	-1.147E+03
2351	1	-1.487E+05	-9.110E+04	-1.414E+05	-1.708E+03	7.771E+03	4.340E+03
2352	1	-2.309E+05	-1.388E+05	-2.303E+05	-3.873E+04	4.186E+03	7.196E+03
2353	1	-2.532E+05	-1.331E+05	-2.385E+05	-1.774E+04	5.395E+03	4.506E+03
2354	1	-5.310E+04	-5.069E+04	-5.003E+04	7.062E+03	7.725E+03	6.405E+03
2355	1	-4.948E+04	-6.298E+04	-5.325E+04	7.477E+03	7.434E+03	1.254E+03
2359	1	-1.478E+05	-1.024E+05	-1.520E+05	7.119E+04	5.601E+03	779
2360	1	-2.505E+05	-1.361E+05	-2.423E+05	7.564E+03	5.212E+03	1.758E+03
2361	1	-2.493E+05	-1.377E+05	-2.456E+05	2.880E+04	3.584E+03	2.265E+03
2362	1	-4.846E+04	-6.491E+04	-5.801E+04	4.253E+03	5.523E+03	1.062E+03
2363	1	-4.819E+04	-6.453E+04	-6.203E+04	511.	2.922E+03	-633
2364	1	-1.474E+05	-9.736E+04	-1.456E+05	-6.080E+03	5.076E+03	1.945E+03
2365	1	-2.378E+05	-1.537E+05	-2.393E+05	-3.780E+04	2.559E+03	2.717E+03

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2366	1	-2	499E+05	-1	329E+05	-2	405E+05	-1	653E+04	2	396E+03	5	363E+03
2367	1	-5	087E+04	-6	394E+04	-5	382E+04	6	013E+03	4	645E+03	1	606E+03
2368	1	-4	674E+04	-6	537E+04	-5	707E+04	6	805E+03	2	264E+03	-882	
2372	1	-1	440E+05	-9	953E+04	-1	548E+05	1	258E+04	2	111E+03	3	289E+03
2373	1	-2	500E+05	-1	365E+05	-2	528E+05	5	385E+03	-599		2	233E+03
2374	1	-2	514E+05	-1	441E+05	-2	400E+05	2	938E+04	1	302E+03	878	
2375	1	-4	335E+04	-6	312E+04	-5	787E+04	3	552E+03	2	093E+03	1	873E+03
2376	1	-4	245E+04	-5	804E+04	-6	171E+04	8	825E+03	-3	784E+03	-1	053E+04
2377	1	-1	416E+05	-9	122E+04	-1	493E+05	-39	7	-339		2	357E+03
2378	1	-2	298E+05	-1	415E+05	-2	420E+05	-3	578E+04	-3	459E+03	2	220E+03
2379	1	-2	497E+05	-1	435E+05	-2	375E+05	-2	540E+04	-1	442E+03	1	931E+03
2380	1	-4	724E+04	-6	098E+04	-5	608E+04	5	225E+03	1	322E+03	3	299E+03
2381	1	-5	173E+04	-5	944E+04	-6	043E+04	-1	060E+03	-2	338E+03	-8	174E+03
2392	1	-1	238E+05	-1	340E+05	-1	510E+05	3	384E+04	7	103E+03	-3	027E+03
2393	1	-2	081E+05	-2	016E+05	-2	476E+05	6	675E+04	8	202E+03	-2	698E+03
2394	1	-1	830E+05	-2	147E+05	-2	486E+05	6	374E+04	6	248E+03	-2	177E+03
2395	1	-6	734E+04	-6	434E+04	-6	509E+04	168		6	025E+03	-1	927E+03
2396	1	-5	994E+04	-4	858E+04	-5	714E+04	-4	394E+03	6	180E+03	-2	077E+03
2397	1	-1	502E+05	-1	242E+05	-1	590E+05	3	300E+04	6	935E+03	-1	007E+03
2398	1	-2	458E+05	-1	584E+05	-2	441E+05	4	987E+04	7	697E+03	1	006E+03
2399	1	-2	263E+05	-1	750E+05	-2	493E+05	6	265E+04	7	719E+03	-261	
2400	1	-6	144E+04	-6	762E+04	-6	471E+04	2	713E+03	7	004E+03	-1	261E+03
2401	1	-6	566E+04	-6	464E+04	-7	089E+04	-481		5	484E+03	-1	879E+03
2403	1	-1	169E+05	-1	317E+05	-1	603E+05	2	916E+04	6	281E+03	-1	137E+03
2406	1	-2	035E+05	-1	957E+05	-2	532E+05	6	064E+04	7	233E+03	-1	976E+03
2407	1	-1	796E+05	-2	146E+05	-2	566E+05	6	150E+04	4	261E+03	-415	
2408	1	-5	786E+04	-5	913E+04	-7	157E+04	-4	342E+03	5	701E+03	-284	
2409	1	-5	645E+04	-4	474E+04	-5	994E+04	-9	889E+03	2	131E+03	-1	152E+03
2410	1	-1	412E+05	-1	185E+05	-1	642E+05	2	831E+04	6	503E+03	-1	170E+03
2411	1	-2	382E+05	-1	550E+05	-2	482E+05	4	520E+04	5	982E+03	144	
2412	1	-2	191E+05	-1	735E+05	-2	517E+05	5	866E+04	4	947E+03	1	338E+03
2413	1	-5	441E+04	-6	408E+04	-6	668E+04	743		5	650E+03	-701	
2414	1	-5	757E+04	-6	430E+04	-7	173E+04	-1	861E+03	2	318E+03	-1	623E+03
2418	1	-1	167E+05	-1	225E+05	-1	601E+05	2	560E+04	3	151E+03	416	
2419	1	-1	997E+05	-1	949E+05	-2	614E+05	6	005E+04	3	447E+03	1	536E+03
2420	1	-1	773E+05	-2	133E+05	-2	434E+05	5	773E+04	1	393E+03	-1	466E+03
2421	1	-5	493E+04	-5	486E+04	-6	453E+04	-7	910E+03	470		393	
2422	1	-4	779E+04	-5	144E+04	-6	374E+04	1	378E+03	-6	009E+03	-8	363E+03
2423	1	-1	347E+05	-1	177E+05	-1	616E+05	2	705E+04	1	887E+03	2	571E+03
2424	1	-2	348E+05	-1	595E+05	-2	583E+05	4	151E+04	2	575E+03	3	392E+03
2425	1	-2	245E+05	-1	702E+05	-2	428E+05	5	841E+04	11	4	2	520E+03
2426	1	-4	939E+04	-6	137E+04	-6	164E+04	-2	555E+03	1	849E+03	2	444E+03
2427	1	-5	439E+04	-4	365E+04	-6	594E+04	-7	143E+03	-4	825E+03	-9	665E+03
2438	1	-1	192E+05	-1	991E+05	-1	960E+05	3	672E+03	3	123E+03	8	027E+03
2439	1	-1	444E+05	-2	510E+05	-2	451E+05	1	754E+04	4	260E+03	-1	472E+03
2440	1	-1	412E+05	-2	620E+05	-2	526E+05	-1	639E+03	3	589E+03	1	277E+03

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2441	1	-8	524E+04	-1	158E+05	-1	229E+05	9	502E+03	5	442E+03	-382
2442	1	-8	248E+04	-1	183E+05	-1	300E+05	3	817E+03	6	441E+03	4 061E+03
2443	1	-1	244E+05	-1	844E+05	-1	887E+05	2	792E+04	6	411E+03	-8 014E+03
2444	1	-1	658E+05	-2	357E+05	-2	484E+05	5	289E+04	5	248E+03	-5 909E+03
2445	1	-1	524E+05	-2	514E+05	-2	535E+05	3	843E+04	5	092E+03	-1 660E+03
2446	1	-8	026E+04	-7	559E+04	-8	449E+04	4	056E+03	2	630E+03	-3 136E+03
2447	1	-7	842E+04	-9	021E+04	-1	071E+05	8	678E+03	7	404E+03	-2 343E+03
2451	1	-1	072E+05	-1	838E+05	-1	975E+05	189		5	549E+03	-1 731E+03
2452	1	-1	434E+05	-2	533E+05	-2	619E+05	1	818E+04	5	379E+03	-1 541E+03
2453	1	-1	379E+05	-2	608E+05	-2	619E+05	-588		2	635E+03	-107
2454	1	-7	567E+04	-9	148E+04	-1	172E+05	2	469E+03	6	772E+03	-1 518E+03
2455	1	-7	436E+04	-8	353E+04	-1	075E+05	891		2	843E+03	-1 130E+03
2456	1	-1	135E+05	-1	659E+05	-1	878E+05	2	190E+04	5	414E+03	-2 325E+03
2457	1	-1	656E+05	-2	332E+05	-2	577E+05	5	025E+04	7	181E+03	-2 574E+03
2458	1	-1	485E+05	-2	439E+05	-2	592E+05	3	693E+04	3	122E+03	-646
2459	1	-6	874E+04	-6	370E+04	-8	649E+04	-1	838E+03	6	769E+03	-1 544E+03
2460	1	-7	172E+04	-7	143E+04	-9	455E+04	829		2	752E+03	100
2464	1	-1	038E+05	-1	631E+05	-1	786E+05	625		3	785E+03	207
2465	1	-1	415E+05	-2	495E+05	-2	605E+05	1	818E+04	4	812E+03	-533
2466	1	-1	364E+05	-2	615E+05	-2	494E+05	522		3	164E+03	-75 8
2467	1	-6	722E+04	-6	318E+04	-8	798E+04	-915		1	540E+03	-223
2468	1	-6	288E+04	-6	070E+04	-8	221E+04	180		-5	875E+03	199
2469	1	-1	092E+05	-1	526E+05	-1	744E+05	1	764E+04	4	095E+03	-553
2470	1	-1	641E+05	-2	274E+05	-2	615E+05	4	849E+04	5	001E+03	-580
2471	1	-1	493E+05	-2	484E+05	-2	482E+05	3	822E+04	3	490E+03	-1 074E+03
2472	1	-6	253E+04	-4	943E+04	-7	200E+04	-7	279E+03	966		384
2473	1	-5	954E+04	-5	694E+04	-7	791E+04	-946		-5	412E+03	-2 010E+03
2484	1	-7	153E+04	-4	934E+04	-5	945E+04	3	397E+03	1	314E+04	5 211E+03
2487	1	-3	840E+04	1	404E+04	2	647E+03	-3	578E+03	2	254E+04	-2 015E+03
2488	1	-2	828E+04	1	617E+04	-2	041E+03	-567		1	463E+04	-113
2489	1	-7	248E+04	-4	212E+04	-4	585E+04	-45 5		1	098E+04	-6 787E+03
2492	1	-3	276E+04	1	032E+03	4	946E+03	-5	236E+03	2	229E+04	-2 960E+03
2493	1	-2	862E+04	8	492E+03	-4	050E+03	-8	406E+03	1	444E+04	-545
2494	1	-5	421E+04	-2	655E+04	-1	580E+04	-8	456E+03	1	128E+04	-2 272E+03
2496	1	-2	165E+04	-6	168E+03	-8	490E+03	-1	076E+04	1	368E+04	-688
2497	1	-4	878E+04	2	923E+04	-4	990E+04	-660		4	183E+03	-1 203E+03
2500	1	-2	930E+04	1	591E+04	3	575E+03	-4	825E+03	1	056E+03	134
2501	1	-3	509E+04	1	392E+04	-1	928E+03	-377		1	491E+03	137
2502	1	-4	577E+04	-2	368E+04	-4	108E+04	-5	785E+03	4	446E+03	-751
2503	1	-2	286E+04	6	733E+03	1	596E+03	-1	078E+04	1	360E+03	94 0
2506	1	-3	196E+04	1	059E+04	-1	706E+03	-9	137E+03	1	306E+03	-21 3
2507	1	-3	287E+04	-1	545E+04	-2	203E+04	-1	320E+04	4	445E+03	-305
2509	1	-2	249E+04	-1	391E+03	-4	176E+03	-1	133E+04	1	103E+03	94 8
2510	1	-5	211E+04	-2	053E+04	-4	318E+04	177		-397		199
2513	1	-3	524E+04	1	140E+04	-4	442E+03	-4	452E+03	-761		9 27
2514	1	-3	571E+04	1	217E+04	-7	335E+03	-123		609		-59 9

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2515	1	-4.842E+04	-1.969E+04	-3.865E+04	-7.367E+03	-843	-580
2518	1	-2.686E+04	4.773E+03	-3.527E+03	-9.877E+03	-976	-78.2
2519	1	-3.408E+04	9.138E+03	-6.305E+03	-8.355E+03	625	841
2520	1	-3.493E+04	-1.555E+04	-2.420E+04	-1.319E+04	-1.175E+03	590
2522	1	-2.431E+04	-904	-5.731E+03	-1.273E+04	486	1.944E+03
2530	1	-1.318E+03	2.994E+03	-1.314E+04	-81.8	1.093E+04	-61.4
2533	1	-1.454E+04	-9.731E+03	-1.805E+04	97.5	-1.804E+03	25.5
2534	1	-1.752E+04	-1.101E+04	-2.052E+04	136	-4.780E+03	214
2535	1	-1.580E+04	-1.013E+04	-1.779E+04	31.8	-368	28.7
2536	1	-1.434E+04	-1.062E+04	-1.790E+04	196	-80.2	-61.0
2537	1	-1.443E+04	-1.043E+04	-1.837E+04	65.3	145	-5.75
2538	1	-2.170E+03	-474	-1.359E+04	-2.370E+03	9.792E+03	-354
2541	1	-1.437E+04	-9.604E+03	-1.792E+04	-257	-1.564E+03	33.6
2542	1	-1.779E+04	-1.096E+04	-2.024E+04	223	-4.092E+03	369
2543	1	-1.590E+04	-9.741E+03	-1.760E+04	150	-416	236
2544	1	-1.415E+04	-1.042E+04	-1.771E+04	255	-71.3	-71.3
2545	1	-1.464E+04	-1.069E+04	-1.845E+04	207	128	24.9
2546	1	-3.567E+03	-5.728E+03	-1.425E+04	-2.863E+03	8.030E+03	-372
2548	1	-1.429E+04	-9.821E+03	-1.777E+04	-330	-1.248E+03	25.9
2549	1	-1.582E+04	-8.814E+03	-1.687E+04	-3.86	-423	270
2550	1	-1.471E+04	-1.131E+04	-1.855E+04	23.6	71.7	60.1
2551	1	-2.561E+04	-4.246E+03	-1.333E+04	91.9	2.918E+03	98.3
2554	1	-1.614E+04	-9.597E+03	-1.725E+04	-82.3	1.264E+03	-22.9
2555	1	-1.354E+04	-8.063E+03	-1.533E+04	-17.4	2.839E+03	62.0
2556	1	-1.660E+04	-8.623E+03	-1.538E+04	-59.2	1.522E+03	-34.9
2557	1	-1.494E+04	-1.075E+04	-1.794E+04	75.8	397	44.0
2558	1	-1.574E+04	-1.075E+04	-1.745E+04	56.1	-44.3	34.8
2559	1	-2.405E+04	-5.093E+03	-1.322E+04	-2.822E+03	2.758E+03	332
2562	1	-1.602E+04	-9.858E+03	-1.724E+04	-203	1.148E+03	35.0
2563	1	-1.396E+04	-8.098E+03	-1.527E+04	-156	2.356E+03	180
2564	1	-1.689E+04	-9.084E+03	-1.555E+04	-112	1.325E+03	231
2565	1	-1.485E+04	-1.078E+04	-1.795E+04	11.8	309	91.6
2566	1	-1.589E+04	-1.078E+04	-1.761E+04	180	-12.2	-25.5
2567	1	-2.170E+04	-9.064E+03	-1.384E+04	-3.621E+03	2.340E+03	443
2569	1	-1.573E+04	-1.006E+04	-1.713E+04	-266	908	41.8
2570	1	-1.691E+04	-8.617E+03	-1.542E+04	-423	841	220
2571	1	-1.577E+04	-1.142E+04	-1.789E+04	27.9	-7.84	10.0
2572	1	-2.797E+04	-3.010E+03	-1.274E+04	-48.7	524	-13.1
2575	1	-1.839E+04	-9.846E+03	-1.659E+04	-30.0	288	-0.522
2576	1	-2.005E+04	-9.216E+03	-1.486E+04	-126	1.131E+03	130
2577	1	-2.139E+04	-9.084E+03	-1.420E+04	-96.4	-267	27.1
2578	1	-1.691E+04	-1.153E+04	-1.810E+04	141	-526	-29.0
2579	1	-1.736E+04	-1.159E+04	-1.798E+04	75.4	-239	-11.2
2580	1	-2.608E+04	-4.151E+03	-1.236E+04	-3.275E+03	360	225
2583	1	-1.815E+04	-1.009E+04	-1.666E+04	-325	226	69.5
2584	1	-1.986E+04	-9.378E+03	-1.506E+04	-424	764	349

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2585	1	-2	135E+04	-9	533E+03	-1	465E+04	-299	-473	61 4
2586	1	-1	670E+04	-1	146E+04	-1	810E+04	190	-398	-70 7
2587	1	-1	755E+04	-1	159E+04	-1	806E+04	242	-223	-53 3
2588	1	-2	333E+04	-8	341E+03	-1	273E+04	-4 101E+03	-85 8	-1 11
2590	1	-1	760E+04	-1	033E+04	-1	665E+04	-420	96 2	134
2591	1	-2	052E+04	-9	246E+03	-1	484E+04	-736	-778	66 0
2592	1	-1	734E+04	-1	210E+04	-1	835E+04	-50 3	-177	-31 2
2606	1	-1	341E+05	-2	542E+05	-2	312E+05	138	3 753E+03	-33 8
2608	1	-3	987E+04	-4	467E+04	-3	943E+04	898	384	-452
2610	1	-9	591E+04	-1	310E+05	-1	367E+05	982	1 941E+03	-149
2611	1	-1	343E+05	-2	549E+05	-2	314E+05	29 1	3 788E+03	-78 0
2612	1	-1	340E+05	-2	538E+05	-2	324E+05	-64 9	3 429E+03	6 01
2613	1	-5	828E+04	-4	445E+04	-3	820E+04	370	-4 39	-158
2614	1	-5	937E+04	-4	411E+04	-4	019E+04	416	349	-222
2615	1	-9	576E+04	-1	310E+05	-1	363E+05	223	1 948E+03	41 9
2616	1	-1	355E+05	-2	553E+05	-2	334E+05	-370	3 423E+03	-28 9
2617	1	-9	785E+04	-4	233E+04	-3	831E+04	94 4	221	37 1
2619	1	-1	351E+05	-2	535E+05	-2	338E+05	195	2 869E+03	-15 5
2621	1	-5	999E+04	-4	263E+04	-4	166E+04	-72 9	531	-40 8
2623	1	-9	734E+04	-1	497E+05	-1	395E+05	1 057E+03	1 777E+03	24 3
2624	1	-1	355E+05	-2	538E+05	-2	341E+05	-251	2 854E+03	-2 17
2625	1	-1	334E+05	-2	526E+05	-2	350E+05	-195	2 694E+03	0 264
2626	1	-5	920E+04	-4	184E+04	-4	042E+04	19 5	456	-31 1
2627	1	-6	088E+04	-4	259E+04	-4	220E+04	-1 04	652	-79 9
2628	1	-9	639E+04	-1	495E+05	-1	390E+05	315	1 773E+03	-5 79
2629	1	-1	356E+05	-2	546E+05	-2	364E+05	-359	2 608E+03	2 91
2630	1	-5	925E+04	-3	989E+04	-3	992E+04	169	633	-12 7
2632	1	-1	356E+05	-2	537E+05	-2	402E+05	183	3 623E+03	-15 2
2634	1	-9	974E+04	-3	902E+04	-4	093E+04	-447	736	105
2636	1	-9	759E+04	-1	479E+05	-1	420E+05	912	2 468E+03	32 3
2637	1	-1	358E+05	-2	539E+05	-2	404E+05	-172	3 602E+03	-56 9
2638	1	-1	362E+05	-2	564E+05	-2	333E+05	-303	2 062E+03	-33 3
2639	1	-5	929E+04	-3	822E+04	-3	968E+04	-137	741	102
2640	1	-5	800E+04	-4	645E+04	-4	528E+04	134	-3 605E+03	281
2641	1	-9	654E+04	-1	475E+05	-1	414E+05	311	2 504E+03	16 1
2642	1	-1	387E+05	-2	589E+05	-2	349E+05	-334	2 379E+03	48 0
2643	1	-5	596E+04	-4	300E+04	-4	270E+04	45 2	-3 464E+03	-34 1
2655	1	-2	426E+04	-5	461E+03	-2	667E+04	9 929E+03	-243	354
2657	1	-3	361E+04	-4	330E+04	-2	682E+04	5 372E+03	6 519E+03	6 191E+03
2659	1	-4	083E+04	-2	184E+04	-1	719E+03	4 147E+03	148	-229
2662	1	-1	478E+04	-2	682E+04	9	508E+03	7 626E+03	4 065E+03	2 347E+03
2663	1	-2	133E+04	-1	006E+04	2	537E+04	3 826E+03	877	380
2664	1	-2	313E+04	-1	195E+04	2	414E+04	9 364E+03	290	519
2665	1	-488		-4	268E+04	3	776E+03	8 140E+03	1 394E+03	1 394E+03
2666	1	-6	709E+03	-4	762E+04	-1	450E+03	8 766E+03	6 156E+03	1 902E+03
2667	1	-3	914E+04	-2	306E+04	-814		-30 3	149	-13 4

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2669	1	-6.383E+03	-3.201E+04	1.340E+04	168	5.332E+03	79.2
2670	1	-1.860E+04	-1.689E+04	2.362E+04	349	1.008E+03	118
2671	1	7.075E+03	-5.111E+04	8.938E+03	6.56	6.972E+03	-77.3
2676	1	-2.573E+04	-8.172E+03	2.496E+04	1.439E+04	656	-424
2678	1	-3.008E+04	-5.946E+04	-2.854E+04	6.772E+03	3.811E+03	882
2680	1	-4.226E+04	-2.169E+04	-3.571E+03	4.551E+03	489	-272
2683	1	-1.154E+04	-3.794E+04	8.347E+03	1.024E+04	2.546E+03	176
2684	1	-1.994E+04	-1.715E+04	2.296E+04	5.703E+03	776	-52.1
2685	1	-2.107E+04	-1.248E+04	2.168E+04	1.094E+04	547	-5.40
2686	1	2.436E+03	-5.402E+04	3.501E+03	3.989E+03	5.028E+03	56.2
2687	1	-1.721E+03	-5.049E+04	-2.880E+03	8.838E+03	2.481E+03	10.3
2688	1	-4.016E+04	-2.393E+04	-2.755E+03	67.9	456	-30.5
2690	1	-2.837E+03	-4.217E+04	1.204E+04	30.4	3.385E+03	-18.2
2691	1	-1.517E+04	-1.902E+04	2.125E+04	390	774	41.5
2692	1	1.051E+04	-5.182E+04	6.977E+03	-129	2.928E+03	-59.4
2697	1	-2.284E+04	-5.440E+03	2.227E+04	1.421E+04	440	-357
2699	1	-2.493E+04	-5.529E+04	-2.919E+04	7.908E+03	743	553
2701	1	-4.055E+04	-1.907E+04	-5.212E+03	4.269E+03	125	-22.8
2704	1	-7.452E+03	-3.544E+04	6.465E+03	1.042E+04	831	-353
2705	1	-1.680E+04	-1.520E+04	1.957E+04	5.706E+03	390	-164
2706	1	-1.938E+04	-8.707E+03	2.140E+04	1.029E+04	-311	244
2707	1	7.289E+03	-4.934E+04	2.251E+03	4.097E+03	963	-283
2708	1	865	-4.309E+04	-7.441E+03	7.372E+03	-1.375E+03	-2.973E+03
2709	1	-3.847E+04	-2.162E+04	-4.679E+03	33.7	115	21.9
2711	1	623	-3.907E+04	9.337E+03	35.9	708	-93.2
2712	1	-1.373E+04	-1.557E+04	2.074E+04	520	-696	-32.0
2713	1	1.345E+04	-4.240E+04	2.298E+03	-389	-2.418E+03	-23.9
2730	1	-2.643E+04	-5.638E+04	-2.853E+04	5.574E+03	8.711E+03	1.689E+03
2732	1	-2.613E+04	-5.402E+04	-2.387E+04	-2.332E+03	7.293E+03	-1.045E+03
2734	1	-5.055E+03	-4.669E+04	-3.062E+03	5.515E+03	8.111E+03	1.217E+03
2737	1	-609	-4.669E+04	3.406E+03	-2.573E+03	7.800E+03	-847
2738	1	2.402E+03	-4.796E+04	3.485E+03	236	8.200E+03	-233
2739	1	1.672E+03	-5.186E+04	-650	1.176E+03	7.192E+03	-67.6
2740	1	-9.304E+03	-3.883E+04	4.829E+03	-3.674E+03	8.022E+03	-517
2741	1	-793	-4.131E+04	4.621E+03	-8.042E+03	6.996E+03	-658
2742	1	4.536E+03	-4.693E+04	7.550E+03	-299	8.495E+03	-215
2744	1	-5.026E+03	-4.140E+04	6.426E+03	-499	8.322E+03	-4.25
2745	1	3.499E+03	-4.761E+04	6.310E+03	-868	7.295E+03	68.6
2746	1	-1.083E+04	-3.495E+04	2.330E+03	-416	7.025E+03	170
2751	1	-2.597E+04	-6.130E+04	-3.065E+04	2.687E+03	5.399E+03	749
2753	1	-2.364E+04	-5.378E+04	-2.713E+04	-3.169E+03	5.178E+03	-939
2755	1	-1.104E+03	-5.278E+04	-2.353E+03	3.915E+03	4.943E+03	-354
2758	1	2.384E+03	-4.615E+04	2.400E+03	-3.878E+03	5.020E+03	-1.140E+03
2759	1	2.221E+03	-5.056E+04	1.545E+03	-415	5.359E+03	-348
2760	1	4.807E+03	-5.068E+04	-1.831E+03	422	3.038E+03	-261
2761	1	-6.783E+03	-3.730E+04	657	-4.148E+03	5.114E+03	-805



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2762	1	2	665E+03	-3	769E+04	2	601E+03	-8	719E+03	2	503E+03	-1	136E+03
2763	1	6	021E+03	-5	101E+04	6	652E+03	-522		5	392E+03	64	0
2765	1	-3	066E+03	-4	099E+04	3	116E+03	-691		5	293E+03	121	
2766	1	3	498E+03	-4	300E+04	4	565E+03	-686		2	557E+03	-267	
2767	1	-6	522E+03	-3	014E+04	197		-348		2	311E+03	208	
2772	1	-1	873E+04	-5	952E+04	-3	006E+04	3	280E+03	2	070E+03	1	128E+03
2774	1	-2	149E+04	-4	882E+04	-2	686E+04	-6	968E+03	-827	-1	044E+03	
2776	1	3	984E+03	-4	973E+04	-1	819E+03	4	738E+03	688		-604	
2779	1	6	711E+03	-4	272E+04	2	260E+03	-5	677E+03	-999	-2	151E+03	
2780	1	5	553E+03	-4	555E+04	458		-1	487E+03	-303	-1	014E+03	
2781	1	6	342E+03	-3	575E+04	-5	209E+03	-440		-2	429E+03	-5	756E+03
2782	1	-3	350E+03	-3	133E+04	-1	539E+03	4	261E+03	-2	019E+03	-1	341E+03
2783	1	7	646E+03	-2	794E+04	-2	356E+03	-5	411E+03	-2	788E+03	-1	545E+03
2784	1	8	884E+03	-4	508E+04	4	413E+03	-902		207		-251	
2785	1	270		-3	265E+04	791		-352		-1	367E+03	-310	
2787	1	7	777E+03	-3	365E+04	-1	941E+03	-109		-2	006E+03	366	
2788	1	-3	559E+03	-2	423E+04	-4	131E+03	-1	047E+03	-759		-206	
2805	1	-3	878E+04	-4	949E+04	-2	856E+04	-6	642E+03	7	366E+03	-862	
2807	1	-3	705E+04	-3	319E+04	-1	404E+04	-9	984E+03	4	323E+03	-1	574E+03
2809	1	-6	585E+03	-3	698E+04	7	435E+03	-1	108E+04	6	111E+03	-1	066E+03
2812	1	-1	417E+04	-2	402E+04	1	082E+04	-1	370E+04	7	437E+03	-681	
2813	1	-1	925E+04	-3	239E+04	1	026E+03	-4	979E+03	8	895E+03	-233	
2814	1	-9	530E+03	-3	086E+04	6	135E+03	-1	413E+04	6	311E+03	-942	
2815	1	-2	377E+04	-2	438E+04	5	161E+03	-5	154E+03	6	062E+03	-203	
2816	1	-1	893E+04	-1	780E+04	5	828E+03	-1	452E+04	8	239E+03	-684	
2817	1	-1	525E+04	-3	240E+04	4	227E+03	42	5	9	281E+03	110	
2819	1	-2	040E+04	-2	812E+04	3	552E+03	573		8	131E+03	155	
2820	1	-1	896E+04	-2	803E+04	547		988		7	157E+03	143	
2821	1	-1	731E+04	-2	192E+04	-516		117		9	490E+03	233	
2826	1	-3	155E+04	-4	468E+04	-3	089E+04	-9	980E+03	6	323E+03	-1	308E+03
2828	1	-3	214E+04	-3	052E+04	-2	665E+04	-1	253E+04	6	486E+03	-821	
2830	1	-3	977E+03	-3	564E+04	3	467E+03	-1	198E+04	5	670E+03	-1	628E+03
2833	1	-9	152E+03	-2	083E+04	2	862E+03	-1	309E+04	5	649E+03	-1	442E+03
2834	1	-1	333E+04	-2	766E+04	-2	958E+03	-5	511E+03	6	932E+03	-967	
2835	1	-4	403E+03	-2	452E+04	2	830E+03	-1	449E+04	1	889E+03	-1	182E+03
2836	1	-2	037E+04	-2	227E+04	-9	636E+03	-5	806E+03	6	642E+03	-605	
2837	1	-1	637E+04	-1	451E+04	-381		-1	433E+04	2	269E+03	-1	058E+03
2838	1	-1	364E+04	-3	040E+04	-2	063E+03	383		6	508E+03	-73	1
2840	1	-1	447E+04	-2	372E+04	-6	430E+03	147		6	498E+03	341	
2841	1	-1	442E+04	-2	256E+04	-3	794E+03	705		1	767E+03	75	9
2842	1	-1	584E+04	-1	784E+04	-6	266E+03	300		2	282E+03	103	
2847	1	-2	324E+04	-4	199E+04	-2	788E+04	-9	027E+03	-375	-1	343E+03	
2849	1	-3	019E+04	-2	503E+04	-2	394E+04	-1	640E+04	-1	552E+03	-1	466E+03
2851	1	655		-2	688E+04	4	227E+03	-1	150E+04	-2	189E+03	-3	213E+03
2854	1	-7	123E+03	-1	518E+04	2	755E+03	-1	426E+04	-1	568E+03	-3	065E+03
2855	1	-1	167E+04	-2	106E+04	-4	495E+03	-5	715E+03	-1	186E+03	-1	361E+03

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2856	1	-2	024E+03	-2	003E+04	-1	844E+03	-1	242E+04	-625	-166
2857	1	-1	714E+04	-1	673E+04	-8	175E+03	-4	599E+03	-1	203E+03
2858	1	-1	409E+04	-8	282E+03	-3	535E+03	-1	221E+04	-1	054E+03
2859	1	-9	880E+03	-2	325E+04	-4	284E+03	268		-1	081E+03
2861	1	-1	515E+04	-1	804E+04	-7	948E+03	781		-347	-98 7
2862	1	-1	348E+04	-1	856E+04	-6	831E+03	1	401E+03	-689	-227
2863	1	-1	559E+04	-1	415E+04	-6	851E+03	-476		-737	-214
2879	1	-3	074E+04	-1	635E+04	-4	689E+03	-6	957E+03	2	109E+04
2881	1	-3	427E+04	-2	556E+04	1	320E+03	-8	031E+03	1	257E+04
2884	1	-2	383E+04	-2	060E+04	-6	658E+03	-1	108E+03	1	999E+04
2885	1	-1	848E+04	-1	608E+04	-1	504E+04	-4	644E+03	1	228E+04
2886	1	-3	230E+04	-2	637E+04	-304		484		1	371E+04
2888	1	-1	854E+04	-1	830E+04	-1	603E+04	131		1	161E+04
2892	1	-2	144E+04	-7	477E+03	-7	023E+03	-8	911E+03	1	464E+03
2894	1	-1	548E+04	-1	584E+04	-5	254E+03	-1	008E+04	4	309E+03
2897	1	-1	534E+04	-1	112E+04	-7	011E+03	-2	483E+03	1	294E+03
2898	1	-1	935E+04	-1	189E+04	-9	864E+03	-5	054E+03	1	009E+03
2899	1	-1	444E+04	-1	570E+04	-7	112E+03	162		4	146E+03
2901	1	-1	987E+04	-1	370E+04	-1	007E+04	-16 7		911	5 53
2905	1	-2	492E+04	-8	206E+03	-1	002E+04	-8	387E+03	-740	-23 0
2907	1	-1	809E+04	-1	349E+04	-7	308E+03	-9	667E+03	-1	514E+03
2910	1	-1	944E+04	-1	192E+04	-9	687E+03	-2	269E+03	-297	53 1
2911	1	-2	090E+04	-1	119E+04	-9	450E+03	-5	270E+03	-671	722
2912	1	-1	791E+04	-1	431E+04	-9	700E+03	325		-513	217
2914	1	-2	172E+04	-1	323E+04	-9	619E+03	146		-1	005E+03
2926	1	-1	759E+04	-1	089E+04	-1	947E+04	155		-3	302E+03
2928	1	-1	432E+04	-1	072E+04	-1	783E+04	189		-80 8	-21 9
2930	1	-3	999E+03	-7	702E+03	-1	429E+04	-1	924E+03	6	585E+03
2933	1	-1	430E+04	-1	055E+04	-1	771E+04	-260		-1	021E+03
2934	1	-1	712E+04	-1	035E+04	-1	841E+04	117		-2	895E+03
2935	1	-1	591E+04	-9	832E+03	-1	688E+04	49 6		-431	164
2936	1	-1	447E+04	-1	091E+04	-1	802E+04	110		-81 3	2 72
2937	1	-1	472E+04	-1	113E+04	-1	838E+04	139		15 8	49 2
2938	1	-4	442E+03	-9	069E+03	-1	500E+04	90 9		6	046E+03
2940	1	-1	421E+04	-1	074E+04	-1	757E+04	-68 8		-949	8 10
2941	1	-1	619E+04	-9	940E+03	-1	689E+04	-54 0		-439	30 9
2942	1	-1	471E+04	-1	124E+04	-1	836E+04	23 7		4 83	-7 89
2947	1	-1	447E+04	-8	868E+03	-1	550E+04	-248		1	741E+03
2949	1	-1	487E+04	-1	106E+04	-1	805E+04	-21 0		207	70 1
2951	1	-1	903E+04	-1	083E+04	-1	344E+04	-2	199E+03	2	007E+03
2954	1	-1	556E+04	-1	065E+04	-1	722E+04	-280		687	35 1
2955	1	-1	462E+04	-9	020E+03	-1	562E+04	-26 9		1	343E+03
2956	1	-1	678E+04	-9	639E+03	-1	581E+04	-338		478	166
2957	1	-1	490E+04	-1	119E+04	-1	803E+04	38 2		136	21 2
2958	1	-1	567E+04	-1	140E+04	-1	794E+04	107		-33 2	3 43
2959	1	-1	778E+04	-1	159E+04	-1	299E+04	-24 6		1	761E+03

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2961	1	-1	544E+04	-1	087E+04	-1	759E+04	-64	9	639	-4	55
2962	1	-1	683E+04	-9	879E+03	-1	585E+04	-26	6	288	10	2
2963	1	-1	568E+04	-1	150E+04	-1	805E+04	22	8	-38	6	7
2968	1	-1	941E+04	-9	981E+03	-1	532E+04	-492		268	285	
2970	1	-1	653E+04	-1	171E+04	-1	830E+04	138		-318	-57	2
2972	1	-2	044E+04	-1	020E+04	-1	243E+04	-2	356E+03	-319	207	
2975	1	-1	720E+04	-1	092E+04	-1	680E+04	-376		-79	3	45
2976	1	-1	689E+04	-1	010E+04	-1	532E+04	-157		-51	1	77
2977	1	-1	978E+04	-1	041E+04	-1	542E+04	-463		-1	044E+03	33
2978	1	-1	640E+04	-1	183E+04	-1	844E+04	74	8	-252	-4	60
2979	1	-1	713E+04	-1	198E+04	-1	845E+04	156		-75	8	-51
2980	1	-1	941E+04	-1	082E+04	-1	220E+04	-67	2	-348	-13	9
2982	1	-1	704E+04	-1	117E+04	-1	688E+04	-33	5	-154	-2	39
2983	1	-1	975E+04	-1	052E+04	-1	571E+04	-73	8	-1	097E+03	-30
2984	1	-1	705E+04	-1	214E+04	-1	855E+04	26	9	-101	11	4
2997	1	-1	343E+05	-1	934E+05	-1	023E+05	663		1	001E+04	35
2998	1	-1	404E+05	-2	435E+05	-1	404E+05	517		3	381E+03	-103
2999	1	-1	360E+05	-2	478E+05	-1	794E+05	-980		5	505E+03	94
3000	1	-1	317E+05	-1	438E+05	-6	828E+04	1	195E+03	1	522E+04	12
3001	1	-8	114E+04	-9	034E+04	-4	604E+04	1	459E+03	1	781E+04	24
3002	1	-1	327E+05	-1	912E+05	-1	010E+05	808		1	008E+04	-33
3003	1	-1	395E+05	-2	450E+05	-1	409E+05	303		3	454E+03	-185
3004	1	-1	348E+05	-2	535E+05	-1	811E+05	1	291E+03	5	624E+03	89
3005	1	-1	313E+05	-1	457E+05	-6	813E+04	3	996E+03	1	521E+04	-204
3006	1	-8	172E+04	-8	437E+04	-4	396E+04	1	217E+03	1	785E+04	-47
3007	1	-1	318E+05	-1	924E+05	-1	007E+05	-616		1	024E+04	242
3008	1	-1	269E+05	-2	554E+05	-1	824E+05	3	033E+03	5	684E+03	-273
3009	1	-7	692E+04	-8	177E+04	-4	040E+04	3	033E+03	1	797E+04	190
3010	1	-9	144E+04	-1	494E+05	-1	259E+05	876		8	125E+03	-93
3011	1	-1	325E+05	-2	581E+05	-2	234E+05	334		4	090E+03	17
3012	1	-1	337E+05	-2	507E+05	-2	270E+05	-758		1	617E+03	149
3013	1	-4	638E+04	-3	788E+04	-2	678E+04	307		1	255E+04	161
3014	1	-6	435E+04	-5	355E+04	-4	146E+04	1	085E+03	2	922E+03	-199
3015	1	-8	947E+04	-1	469E+05	-1	245E+05	719		8	131E+03	165
3016	1	-1	314E+05	-2	592E+05	-2	234E+05	-236		4	076E+03	47
3017	1	-1	328E+05	-2	549E+05	-2	280E+05	1	069E+03	1	675E+03	-7
3018	1	-4	671E+04	-3	819E+04	-2	636E+04	1	923E+03	1	282E+04	327
3019	1	-6	421E+04	-4	844E+04	-3	930E+04	212		3	059E+03	-89
3020	1	-8	823E+04	-1	476E+05	-1	245E+05	2	105E+03	8	226E+03	293
3021	1	-1	345E+05	-2	569E+05	-2	294E+05	-361		1	594E+03	-47
3022	1	-6	007E+04	-4	414E+04	-3	479E+04	1	742E+03	2	951E+03	-118
3030	1	-1	435E+05	-1	342E+05	-6	349E+04	-2	147E+03	6	948E+03	-720
3033	1	-1	603E+05	-1	630E+05	-7	108E+04	1	376E+04	-8	279E+03	3
3034	1	-1	465E+05	-1	311E+05	-5	692E+04	5	070E+03	-1	811E+03	872
3035	1	-8	420E+04	-3	054E+04	-9	407E+03	-2	568E+03	1	455E+03	-348
3036	1	-1	415E+05	-1	595E+05	-7	336E+04	-2	289E+04	-1	074E+04	7

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3037	1	-1.137E+05	-1.455E+05	-7.114E+04	-9.631E+03	-1.267E+04	2.965E+03
3038	1	-1.414E+05	-1.436E+05	-6.683E+04	5.963E+03	6.242E+03	1.261E+03
3041	1	-1.324E+05	-1.375E+05	-6.576E+04	-1.150E+04	-6.314E+03	5.811E+03
3042	1	-1.383E+05	-1.394E+05	-5.778E+04	679.	-2.344E+03	3.751E+03
3043	1	-6.534E+04	-5.827E+04	-1.272E+04	1.414E+04	431	3.591E+03
3044	1	-1.448E+05	-1.073E+05	-6.880E+04	-1.712E+04	-1.095E+04	1.221E+04
3045	1	-7.211E+04	-5.761E+04	-3.916E+04	-3.033E+04	-1.026E+04	1.067E+04
3046	1	-1.378E+05	-1.451E+05	-6.600E+04	2.848E+03	5.072E+03	1.369E+03
3048	1	-1.459E+05	-1.205E+05	-6.634E+04	-8.498E+03	-5.524E+03	8.835E+03
3049	1	-5.578E+04	-4.912E+04	-1.089E+04	-272	-1.555E+03	5.421E+03
3050	1	-9.486E+04	-5.564E+04	-4.646E+04	863	-5.790E+03	1.504E+04
3051	1	-3.560E+04	-1.859E+03	2.505E+03	-2.718E+03	9.494E+03	406.
3054	1	-6.343E+04	-3.524E+04	-2.067E+04	1.611E+04	661	-1.286E+03
3055	1	-2.476E+04	2.416E+04	2.967E+04	9.819E+03	4.671E+03	977
3056	1	-5.554E+04	2.241E+04	2.549E+04	-1.825E+03	5.088E+03	174.
3057	1	-5.194E+04	-6.127E+04	-4.442E+04	-1.805E+04	-3.332E+03	2.451E+03
3058	1	-8.784E+04	-9.875E+04	-6.640E+04	-1.052E+04	5.004E+03	-1.890E+03
3059	1	-3.171E+04	-9.672E+03	1.370E+03	7.513E+03	9.428E+03	858.
3062	1	-1.789E+04	-1.058E+04	1.007E+03	-3.043E+03	-975	4.056E+03
3063	1	-4.178E+03	1.349E+04	2.995E+04	1.067E+04	2.652E+03	2.775E+03
3064	1	-3.748E+04	-1.005E+03	2.465E+04	1.791E+04	3.484E+03	-1.619E+03
3065	1	-4.211E+04	-7.946E+03	-2.506E+04	-1.074E+04	-536	6.725E+03
3066	1	-4.482E+04	-2.900E+04	-3.595E+04	-2.203E+04	-1.145E+03	3.857E+03
3067	1	-2.243E+04	-1.036E+04	4.245E+03	6.017E+03	8.565E+03	1.567E+03
3069	1	-2.026E+04	2.545E+03	-926	-1.268E+03	-118	6.728E+03
3070	1	-1.65E+04	-3.509E+03	2.711E+04	9.217E+03	1.300E+03	235
3071	1	-5.899E+04	-3.354E+04	-4.528E+04	3.194E+03	5.732E+03	5.208E+03
3084	1	-1.774E+05	-1.313E+05	-9.769E+04	-2.018E+04	-6.839E+03	9.354E+03
3085	1	-1.848E+05	-1.599E+05	-1.603E+05	-3.366E+04	-8.035E+03	3.798E+03
3086	1	-2.105E+05	-1.624E+05	-1.825E+05	-4.996E+04	-2.064E+03	5.705E+03
3089	1	-1.456E+05	-1.330E+05	-1.279E+05	-3.180E+04	-6.498E+03	7.035E+03
3090	1	-1.425E+05	-1.252E+05	-1.251E+05	-7.939E+03	-4.565E+03	-3.378E+04
3091	1	-1.552E+05	-1.591E+05	-1.889E+05	-3.123E+04	-5.340E+03	-4.043E+03
3094	1	-1.394E+05	-1.382E+05	-6.085E+04	-1.429E+04	-1.348E+04	-3.231E+04
3095	1	-1.186E+05	-8.144E+04	-1.224E+05	1.642E+04	616	2.670E+04
3097	1	-1.279E+05	-8.113E+04	-1.267E+05	-2.344E+04	3.009E+03	5.710E+03
3098	1	-1.751E+05	-1.597E+05	-2.056E+05	-4.383E+04	2.312E+03	4.297E+03
3099	1	-1.994E+05	-1.430E+05	-2.178E+05	-5.747E+04	4.781E+03	6.000E+03
3102	1	-8.839E+04	-8.177E+04	-1.018E+05	-3.329E+04	-1.354E+03	5.599E+03
3103	1	-1.307E+05	-1.312E+05	-1.862E+05	-1.367E+04	-1.098E+03	1.004E+03
3104	1	-1.394E+05	-1.591E+05	-2.104E+05	-4.194E+04	2.927E+03	1.349E+04
3107	1	-9.710E+04	-1.015E+05	-1.247E+05	-1.128E+04	-1.373E+03	-2.355E+03
3108	1	-9.624E+04	-1.015E+05	-1.651E+05	7.639E+03	-4.578E+03	-1.802E+04
3117	1	-2.024E+05	-1.365E+05	-1.034E+05	1.761E+04	6.717E+03	9.427E+03
3118	1	-2.529E+05	-1.423E+05	-1.411E+05	8.787E+03	1.769E+03	3.083E+03
3119	1	-2.611E+05	-1.441E+05	-1.908E+05	3.215E+04	1.093E+04	2.941E+03

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3120	1	-1	503E+05	-1	275E+05	-7	044E+04	4	959E+03	4	180E+03	1	586E+04
3121	1	-9	242E+04	-8	167E+04	-5	362E+04	5	161E+03	1	398E+04	1	732E+04
3122	1	-1	959E+05	-1	320E+05	-1	030E+05	-4	391E+03	-950		1	165E+04
3123	1	-2	330E+05	-1	526E+05	-1	399E+05	-2	880E+04	-1	687E+03	1	736E+03
3124	1	-2	605E+05	-1	354E+05	-1	875E+05	-1	616E+04	4	643E+03	7	037E+03
3125	1	-1	481E+05	-1	201E+05	-7	057E+04	2	423E+03	-3	788E+03	1	639E+04
3126	1	-8	831E+04	-7	645E+04	-4	849E+04	6	982E+03	4	025E+03	1	667E+04
3130	1	-1	504E+05	-9	515E+04	-1	420E+05	1	833E+04	1	422E+04	6	572E+03
3131	1	-2	657E+05	-1	355E+05	-2	380E+05	8	903E+03	1	212E+04	3	403E+03
3132	1	-2	612E+05	-1	419E+05	-2	431E+05	3	306E+04	8	240E+03	19	3
3133	1	-4	051E+04	-4	588E+04	-4	070E+04	6	407E+03	1	188E+04	1	040E+04
3134	1	-5	279E+04	-6	644E+04	-5	649E+04	3	244E+03	8	264E+03	1	489E+03
3135	1	-1	495E+05	-8	318E+04	-1	325E+05	-2	289E+03	9	330E+03	6	811E+03
3136	1	-2	354E+05	-1	370E+05	-2	288E+05	-3	785E+04	7	094E+03	5	148E+03
3137	1	-2	571E+05	-1	238E+05	-2	327E+05	-1	538E+04	8	730E+03	3	340E+03
3138	1	-4	434E+04	-2	814E+04	-3	316E+04	8	079E+03	4	967E+03	7	944E+03
3139	1	-5	088E+04	-5	722E+04	-5	044E+04	1	070E+04	8	887E+03	1	947E+03
3150	1	-1	884E+05	-1	863E+05	-1	435E+05	3	807E+04	3	224E+04	1	437E+03
3151	1	-2	045E+05	-1	855E+05	-1	429E+05	4	848E+04	7	203E+03	-6	133E+03
3152	1	-1	769E+05	-2	031E+05	-2	054E+05	5	121E+04	8	653E+03	-1	039E+03
3153	1	-1	858E+05	-1	542E+05	-1	147E+05	1	900E+04	3	345E+04	1	177E+04
3154	1	-8	701E+04	-7	906E+04	-8	052E+04	1	124E+04	2	160E+04	1	316E+04
3155	1	-2	004E+05	-1	507E+05	-1	106E+05	3	334E+04	1	401E+04	5	554E+03
3156	1	-2	412E+05	-1	618E+05	-1	457E+05	4	237E+04	7	992E+03	-1	731E+03
3157	1	-2	258E+05	-1	771E+05	-1	981E+05	6	073E+04	1	218E+04	-2	285E+03
3158	1	-1	649E+05	-1	286E+05	-7	296E+04	9	775E+03	1	181E+04	1	456E+04
3159	1	-1	093E+05	-8	837E+04	-7	488E+04	8	805E+03	2	139E+04	1	599E+04
3163	1	-1	093E+05	-1	142E+05	-1	454E+05	3	020E+04	355		1	008E+04
3164	1	-2	037E+05	-1	973E+05	-2	537E+05	6	233E+04	4	648E+03	3	976E+03
3165	1	-1	849E+05	-2	174E+05	-2	406E+05	6	598E+04	885		2	717E+03
3166	1	-4	767E+04	-4	169E+04	-5	583E+04	2	061E+03	7	526E+03	1	242E+04
3167	1	-6	867E+04	-5	282E+04	-5	316E+04	-1	447E+03	4	655E+03	3	670E+03
3168	1	-1	429E+05	-1	181E+05	-1	619E+05	3	377E+04	1	114E+04	5	575E+03
3169	1	-2	461E+05	-1	568E+05	-2	454E+05	5	081E+04	1	090E+04	130	
3170	1	-2	307E+05	-1	775E+05	-2	478E+05	6	547E+04	4	481E+03	-889	
3171	1	-5	069E+04	-5	322E+04	-5	900E+04	3	196E+03	1	489E+04	1	185E+04
3172	1	-7	124E+04	-6	761E+04	-7	002E+04	1	644E+03	5	422E+03	2	153E+03
3183	1	-1	521E+05	-1	726E+05	-1	559E+05	-1	230E+03	5	119E+03	-5	007E+04
3184	1	-1	323E+05	-1	642E+05	-1	654E+05	-1	945E+04	4	570E+03	-3	481E+03
3185	1	-1	484E+05	-2	055E+05	-1	640E+05	1	871E+04	1	196E+04	-3	815E+04
3186	1	-1	151E+05	-1	245E+05	-1	462E+05	6	332E+03	-2	355E+03	3	201E+03
3187	1	-1	599E+05	-2	057E+05	-1	968E+05	3	356E+04	2	255E+04	-1	831E+04
3188	1	-1	753E+05	-1	945E+05	-1	425E+05	3	592E+04	1	159E+04	-1	700E+04
3189	1	-1	577E+05	-1	985E+05	-2	233E+05	1	935E+04	1	512E+03	2	813E+03
3190	1	-1	577E+05	-1	879E+05	-1	586E+05	2	734E+04	2	852E+04	-7	215E+03
3191	1	-1	100E+05	-1	251E+05	-1	534E+05	3	249E+04	1	260E+04	2	594E+03

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3195	1	-1.304E+05	-2.072E+05	-2.167E+05	-4.450E+03	1.524E+03	2.620E+04
3196	1	-1.559E+05	-2.232E+05	-2.362E+05	8.422E+03	-1.787E+03	2.675E+04
3197	1	-1.514E+05	-2.777E+05	-2.486E+05	-4.312E+03	3.627E+03	-1.061E+04
3198	1	-9.885E+04	-1.347E+05	-1.513E+05	1.534E+04	-1.183E+03	2.910E+04
3199	1	-1.009E+05	-1.714E+05	-1.699E+05	-16.4	2.847E+03	-1.448E+04
3200	1	-1.290E+05	-1.697E+05	-1.860E+05	2.971E+04	-5.505E+03	2.635E+04
3201	1	-1.661E+05	-2.202E+05	-2.480E+05	4.725E+04	-4.620E+03	1.817E+04
3202	1	-1.575E+05	-2.556E+05	-2.391E+05	4.136E+04	1.059E+03	6.037E+03
3203	1	-6.789E+04	-5.606E+04	-7.414E+04	1.180E+04	4.725E+03	1.610E+04
3204	1	-9.804E+04	-1.250E+05	-1.198E+05	2.274E+04	3.339E+03	7.233E+03
3215	1	-1.232E+05	-1.606E+05	-8.667E+04	694	1.098E+04	-8.724E+03
3218	1	-9.134E+04	-9.682E+04	-1.134E+05	5.644E+03	-528	4.197E+03
3219	1	-9.038E+04	-5.422E+04	2.939E+03	3.583E+04	3.824E+03	1.715E+03
3220	1	-1.087E+05	-1.384E+05	-7.774E+04	1.618E+04	1.498E+03	-1.418E+04
3223	1	-8.501E+04	-7.487E+04	-1.804E+05	-1.757E+03	-6.374E+03	1.773E+03
3224	1	-3.532E+04	-1.615E+04	1.348E+04	-2.937E+03	898	7.207E+03
3225	1	-1.259E+05	-1.305E+05	-7.733E+04	6.384E+03	9.729E+03	2.165E+03
3227	1	-5.004E+04	-2.510E+04	-1.410E+03	-2.448E+03	-4.222E+03	7.070E+03
3228	1	-7.944E+04	-6.139E+04	-6.603E+04	7.157E+03	-5.671E+03	1.172E+04
3231	1	-3.284E+04	1.952E+04	2.987E+04	5.584E+03	1.264E+03	3.051E+03
3232	1	-4.058E+04	1.561E+04	1.656E+04	-2.202E+03	631	-4.198E+03
3233	1	-4.514E+04	-2.848E+04	-3.402E+04	1.071E+04	6.724E+03	1.894E+04
3236	1	-6.794E+03	2.739E+04	2.661E+04	-6.484E+03	347	1.369E+04
3237	1	-3.767E+04	2.194E+04	3.867E+04	8.853E+03	4.434E+03	1.902E+03
3238	1	-2.382E+04	-499	-8.882E+03	-4.004E+03	4.190E+03	1.353E+04
3240	1	-2.756E+04	1.429E+03	2.630E+04	-7.732E+03	4.585E+03	5.730E+03
3249	1	-1.404E+05	-2.459E+05	-1.413E+05	456	3.413E+03	-192
3251	1	-1.282E+05	-1.474E+05	-6.699E+04	3.670E+03	1.495E+04	-233
3253	1	-1.315E+05	-1.948E+05	-1.011E+05	1.142E+03	1.033E+04	84.6
3254	1	-1.401E+05	-2.474E+05	-1.417E+05	536	3.359E+03	-25.1
3255	1	-1.369E+05	-2.545E+05	-1.820E+05	818	5.509E+03	-17.8
3256	1	-1.261E+05	-1.486E+05	-6.629E+04	1.269E+03	1.482E+04	-78.9
3257	1	-7.565E+04	-8.706E+04	-4.179E+04	2.049E+03	1.799E+04	19.1
3258	1	-1.307E+05	-1.952E+05	-1.009E+05	141	1.035E+04	93.9
3259	1	-1.359E+05	-2.551E+05	-1.819E+05	-175	5.632E+03	-151
3260	1	-7.433E+04	-8.677E+04	-4.092E+04	-0.639	1.798E+04	171
3262	1	-1.333E+05	-2.600E+05	-2.245E+05	6.86	3.994E+03	45.1
3264	1	-4.277E+04	-3.692E+04	-2.403E+04	2.081E+03	1.314E+04	179
3266	1	-8.856E+04	-1.501E+05	-1.255E+05	937	8.392E+03	177
3267	1	-1.331E+05	-2.609E+05	-2.247E+05	279	3.952E+03	10.9
3268	1	-1.338E+05	-2.555E+05	-2.287E+05	537	1.623E+03	25.5
3269	1	-4.023E+04	-3.733E+04	-2.309E+04	754	1.330E+04	96.9
3270	1	-5.923E+04	-4.909E+04	-3.568E+04	1.488E+03	2.740E+03	-239
3271	1	-8.737E+04	-1.503E+05	-1.253E+05	163	8.478E+03	50.0
3272	1	-1.338E+05	-2.567E+05	-2.292E+05	-216	1.554E+03	-33.9
3273	1	-5.749E+04	-4.795E+04	-3.397E+04	159	2.646E+03	2.78

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3285	1	-1.400E+05	-1.314E+05	-5.741E+04	-4.079E+03	-1.969E+03	3.129E+03
3287	1	-1.489E+05	-1.197E+05	-6.971E+04	-842	-5.134E+03	1.114E+04
3289	1	-1.361E+05	-1.418E+05	-6.437E+04	1.078E+03	5.829E+03	985
3292	1	-1.445E+05	-1.264E+05	-6.187E+04	-1.126E+03	-2.703E+03	5.309E+03
3293	1	-1.428E+05	-1.281E+05	-5.739E+04	-1.420E+03	-1.242E+03	1.116E+03
3294	1	-5.882E+04	-4.323E+04	-1.280E+04	-849	158	3.610E+03
3295	1	-1.409E+05	-1.296E+05	-6.326E+04	1.208E+03	-2.014E+03	4.512E+03
3296	1	-6.403E+04	-5.518E+04	-2.550E+04	137	5.595E+03	1.034E+04
3297	1	-1.365E+05	-1.410E+05	-6.412E+04	137	-478	-478
3299	1	-1.416E+05	-1.287E+05	-6.024E+04	216	-1.534E+03	-145
3300	1	-5.959E+04	-4.144E+04	-1.375E+04	54.6	137	101
3301	1	-5.203E+04	-3.817E+04	-1.883E+04	387	2.970E+03	360
3306	1	4.117E+03	1.932E+04	3.002E+04	3.492E+03	1.958E+03	3.742E+03
3308	1	-2.796E+04	-1.306E+04	-1.552E+04	4.596E+03	2.481E+03	7.341E+03
3310	1	-1.611E+04	-4.866E+03	6.851E+03	2.836E+03	8.918E+03	1.233E+03
3313	1	-50.3	6.986E+03	1.510E+04	4.378E+03	2.177E+03	5.233E+03
3314	1	4.152E+03	2.207E+04	2.739E+04	1.145E+03	2.443E+03	1.610E+03
3315	1	-1.981E+04	-3.516E+03	2.551E+04	4.795E+03	1.986E+03	856
3316	1	7.777E+03	-7.116E+03	1.270E+04	3.973E+03	5.696E+03	3.364E+03
3317	1	-1.369E+04	-3.225E+04	-2.046E+03	6.936E+03	2.097E+03	2.097E+03
3318	1	-1.461E+04	-3.378E+03	7.227E+03	-27.0	8.843E+03	-52.8
3320	1	8.277E+03	5.581E+03	1.866E+04	259	3.761E+03	450
3321	1	-1.729E+04	-4.554E+03	2.474E+04	169	2.409E+03	29.7
3322	1	3.131E+03	-3.701E+04	1.075E+04	421	8.188E+03	-263
3329	1	-1.457E+05	-1.331E+05	-6.879E+04	3.426E+03	1.140E+03	1.069E+04
3341	1	-1.566E+05	-1.376E+05	-7.012E+04	3.967E+03	7.046E+03	9.596E+03
3343	1	-1.388E+05	-1.311E+05	-6.161E+04	2.947E+03	-50.8	7.995E+03
3346	1	-1.439E+05	-1.393E+05	-6.159E+04	1.678E+03	4.428E+03	6.566E+03
3347	1	-1.396E+05	-1.398E+05	-6.159E+04	1.302E+03	2.249E+03	3.181E+03
3348	1	-5.669E+04	-6.814E+04	-2.486E+04	2.302E+03	8.308E+03	9.704E+03
3349	1	-1.573E+05	-1.478E+05	-6.482E+04	537	7.498E+03	2.157E+03
3350	1	-5.781E+04	-6.583E+04	-2.534E+04	-2.507E+03	1.475E+04	8.944E+03
3351	1	-1.367E+05	-1.370E+05	-6.056E+04	0.560	1.670E+03	-602
3353	1	-1.483E+05	-1.452E+05	-6.132E+04	-250	4.962E+03	-479
3354	1	-5.149E+04	-6.555E+04	-2.110E+04	-498	1.067E+04	209
3355	1	-6.124E+04	-6.537E+04	-3.307E+04	-155	1.490E+04	-89.6
3360	1	-1.937E+04	-3.281E+04	-1.806E+04	5.335E+03	1.052E+04	8.351E+03
3362	1	-1.286E+04	-3.110E+04	-2.013E+04	-1.943E+03	1.688E+04	1.028E+04
3364	1	1.867E+03	-1.705E+04	3.338E+03	4.778E+03	8.288E+03	6.684E+03
3367	1	1.290E+04	-1.701E+04	5.743E+03	-2.417E+03	1.527E+04	7.665E+03
3368	1	1.382E+04	-1.748E+04	9.206E+03	187	1.422E+04	3.524E+03
3369	1	-3.031E+03	-4.710E+04	-1.759E+03	2.564E+03	9.537E+03	870
3370	1	1.395E+04	-7.375E+03	-1.199E+03	-3.147E+03	1.696E+04	4.120E+03
3371	1	-2.387E+03	-3.772E+04	4.424E+03	8.913E+03	1.500E+03	1.500E+03
3372	1	1.728E+04	-1.226E+04	1.459E+04	-339	1.151E+04	360
3374	1	1.623E+04	-8.444E+03	3.979E+03	-451	1.647E+04	127

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3375	1	2	194E+03	-4	284E+04	6	614E+03	-735	1	017E+04	-166		
3376	1	-9	053E+03	-3	006E+04	2	907E+03	-312	8	640E+03	-301		
3393	1	-1	719E+05	-1	394E+05	-6	859E+04	7	364E+03	1	525E+04		
3395	1	-1	754E+05	-1	931E+05	-1	528E+05	7	245E+03	3	352E+04		
3397	1	-1	592E+05	-1	450E+05	-6	162E+04	1	052E+03	9	260E+03		
3400	1	-1	869E+05	-1	761E+05	-1	133E+03	-266	2	941E+04	4	636E+03	
3401	1	-1	713E+05	-1	565E+05	-6	832E+04	977	1	470E+04	739		
3402	1	-6	308E+04	-6	724E+04	-3	617E+04	-4	312E+03	1	851E+04		
3403	1	-1	745E+05	-1	974E+05	-1	454E+05	-616	2	819E+04	9	532E+03	
3404	1	-5	861E+04	-6	506E+04	-5	237E+04	-4	646E+03	9	132E+03		
3405	1	-1	680E+05	-1	580E+05	-6	990E+04	-171	1	116E+04	8	546E+03	
3407	1	-1	874E+05	-1	872E+05	-1	222E+05	-818	2	687E+04	-1	570E+03	
3408	1	-6	578E+04	-7	056E+04	-4	840E+04	170	1	465E+04	-428		
3409	1	-5	744E+04	-6	909E+04	-5	541E+04	-219	2	586E+03	356		
3414	1	-1	654E+04	-2	732E+04	-3	149E+04	-4	211E+03	1	350E+04		
3416	1	-9	571E+03	-2	372E+03	-5	049E+03	-6	477E+03	3	919E+03		
3418	1	1	851E+04	-6	745E+03	-3	087E+03	-9	083E+03	1	521E+04		
3421	1	1	955E+04	9	624E+03	1	199E+04	-1	024E+04	5	641E+03		
3422	1	1	563E+04	266	-6	025E+03	-4	076E+03	9	285E+03	5	072E+03	
3423	1	-6	819E+03	-2	613E+04	9	325E+03	-1	317E+04	7	321E+03		
3424	1	8	232E+03	1	042E+04	8	627E+03	-3	582E+03	316	5	235E+03	
3425	1	-2	373E+04	-2	001E+04	2	925E+03	-1	233E+04	7	803E+03		
3426	1	1	767E+04	1	859E+03	-4	534E+03	180	1	111E+04	523		
3428	1	1	647E+04	8	314E+03	2	313E+03	695	971	7	216E+03		
3429	1	-1	522E+04	-2	352E+04	3	276E+03	583	8	232E+03	-28	2	
3430	1	-2	291E+04	-2	469E+04	-4	446E+03	75	0	8	426E+03	1	154E+03
3446	1	-9	345E+04	-7	135E+04	285	-690	-225	8	447E+03	2	673E+03	
3448	1	-1	294E+05	-1	320E+05	-6	897E+04	-690	-4	583E+03	4	039E+03	
3451	1	-9	643E+04	-7	333E+04	-1	060E+03	7	78	-6	694E+03	332	
3452	1	-5	828E+04	-3	561E+04	-9	772E+03	607	-4	583E+03	-2	38	
3453	1	-1	292E+05	-1	337E+05	-6	746E+04	-507	7	30E+03	-2	38	
3455	1	-6	078E+04	-3	768E+04	-1	014E+04	278	-3	256E+03	99	0	
3459	1	-1	204E+04	6	330E+03	612	-2	215E+03	-1	979E+03	1	035E+04	
3461	1	-3	779E+03	3	527E+03	1	414E+03	-4	640E+03	1	327E+03	8	802E+03
3464	1	-9	347E+03	-2	420E+03	-6	796E+03	1	308E+03	-3	146E+03	3	602E+03
3465	1	-2	384E+04	-1	334E+04	8	613E+03	-1	017E+03	4	405E+03	3	053E+03
3466	1	-3	694E+03	1	262E+03	-3	151E+03	309	-607	-0	526	27	6
3468	1	-2	216E+04	-1	403E+04	8	052E+03	306	4	329E+03	-99	6	
3476	1	-1	125E+05	-1	483E+05	-8	006E+04	-1	592E+03	5	999E+03	1	954E+03
3477	1	-1	032E+05	-1	624E+05	-9	271E+04	219	6	091E+03	2	242E+03	
3478	1	-8	834E+04	-1	684E+05	-1	076E+05	1	641E+03	8	390E+03	-2	553E+03
3479	1	-1	211E+05	-1	342E+05	-6	756E+04	-1	717E+03	5	050E+03	27	6
3480	1	-5	561E+04	-6	347E+04	-2	526E+04	154	6	395E+03	931	1	490E+03
3481	1	-1	129E+05	-1	510E+05	-8	016E+04	-725	5	014E+03	1	490E+03	
3482	1	-1	061E+05	-1	721E+05	-9	092E+04	40	8	6	932E+03	2	219E+03
3483	1	-8	698E+04	-1	704E+05	-1	059E+05	-1	693E+03	8	153E+03	3	998E+03



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3484	1	-1	222E+05	-1	409E+05	-7	023E+04	-2	439E+03	2	639E+03	-301
3485	1	-5	785E+04	-6	936E+04	-2	181E+04	1	222E+03	7	881E+03	1 450E+03
3486	1	-1	134E+05	-1	577E+05	-7	999E+04	-750	4	630E+03	-591	
3487	1	-8	450E+04	-1	694E+05	-1	063E+05	-614	7	797E+03	1 538E+03	
3488	1	-6	130E+04	-6	881E+04	-2	288E+04	198	9	910E+03	1 053E+03	
3489	1	-3	706E+04	-8	794E+04	-5	977E+04	3 688E+03	3	410E+03	-3 694E+03	
3490	1	-8	423E+04	-1	830E+05	-1	285E+05	-893	4	186E+03	3 560E+03	
3491	1	-1	280E+05	-2	287E+05	-1	637E+05	-8 600E+03	3	701E+03	1 864E+04	
3492	1	8	919E+03	1	732E+03	2	150E+04	2 297E+03	6	337E+03	2 165E+03	
3493	1	-4	759E+04	-5	604E+04	-2	295E+03	-903	3	910E+03	3 336E+03	
3494	1	-3	977E+04	-9	557E+04	-5	078E+04	-1 190E+03	6	931E+03	6 353E+03	
3495	1	-8	473E+04	-1	892E+05	-1	312E+05	-3 337E+03	1	910E+03	3 854E+03	
3496	1	-1	299E+05	-2	203E+05	-1	398E+05	1 257E+04	3	843E+03	-1 461E+04	
3497	1	6	078E+03	5	340E+03	2	653E+04	2 979E+03	1	056E+04	-1 205E+03	
3498	1	-3	073E+04	-3	558E+04	1	963E+04	-1 230E+03	-1	746E+03	1 476E+03	
3499	1	-3	783E+04	-8	754E+04	-5	075E+04	-396	5	537E+03	-363	
3500	1	-1	436E+05	-2	141E+05	-1	581E+05	3 920E+03	1	434E+04	-229	
3501	1	-3	587E+04	-2	659E+04	2	092E+04	-395	-1	691E+03	-630	
3510	1	-1	067E+05	-1	739E+05	-9	090E+04	-340	7	368E+03	75 5	
3512	1	-1	193E+05	-1	413E+05	-6	869E+04	-1 006E+03	2	025E+03	-140	
3514	1	-1	133E+05	-1	588E+05	-8	059E+04	-478	4	827E+03	273	
3515	1	-1	078E+05	-1	754E+05	-9	169E+04	-185	7	140E+03	258	
3516	1	-8	275E+04	-1	689E+05	-1	049E+05	-242	6	872E+03	686	
3517	1	-1	181E+05	-1	415E+05	-6	883E+04	-149	2	540E+03	-80 7	
3518	1	-6	203E+04	-6	957E+04	-2	338E+04	-285	9	838E+03	-381	
3519	1	-1	128E+05	-1	584E+05	-7	998E+04	-79 4	4	843E+03	0 779	
3520	1	-8	317E+04	-1	693E+05	-1	048E+05	85 8	7	031E+03	71 6	
3521	1	-6	153E+04	-7	014E+04	-2	340E+04	18 5	9	328E+03	45 1	
3523	1	-7	747E+04	-1	823E+05	-1	263E+05	-1 005E+03	-1	777E+03	1 364E+03	
3525	1	936	6 377E+03	2	223E+04	654	1 235E+04	-1 406E+03	1	235E+04	-1 406E+03	
3527	1	-3	817E+04	-8	722E+04	-5	290E+04	-131	4	978E+03	147	
3528	1	-7	594E+04	-1	806E+05	-1	267E+05	-77 0	-1	794E+03	580	
3529	1	-1	466E+05	-2	161E+05	-1	531E+05	-727	1	367E+04	2 679E+03	
3530	1	-115	5 110E+03	2	153E+04	-208	1 30E+04	-209	1	130E+04	-209	
3531	1	-3	720E+04	-2	672E+04	1	867E+04	-368	-1	109E+03	-58 1	
3532	1	-3	795E+04	-8	799E+04	-5	235E+04	155	4	569E+03	121	
3533	1	-1	455E+05	-2	169E+05	-1	490E+05	-548	1	225E+04	95 4	
3534	1	-3	744E+04	-2	840E+04	1	722E+04	-18 7	-1	192E+03	-1 94	

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## S T R A I N S

NODE POINT	11	22	33	12	13	23
1	1	1	1	1	1	1
2	1	1	1	1	1	1
3	1	1	1	1	1	1
4	1	1	1	1	1	1
5	1	1	1	1	1	1
6	1	1	1	1	1	1
7	1	1	1	1	1	1
8	1	1	1	1	1	1
9	1	1	1	1	1	1
10	1	1	1	1	1	1
11	1	1	1	1	1	1
12	1	1	1	1	1	1
13	1	1	1	1	1	1
14	1	1	1	1	1	1
15	1	1	1	1	1	1
16	1	1	1	1	1	1
17	1	1	1	1	1	1
18	1	1	1	1	1	1
19	1	1	1	1	1	1
20	1	1	1	1	1	1
21	1	1	1	1	1	1
22	1	1	1	1	1	1
23	1	1	1	1	1	1
24	1	1	1	1	1	1
25	1	1	1	1	1	1
26	1	1	1	1	1	1
27	1	1	1	1	1	1
28	1	1	1	1	1	1
29	1	1	1	1	1	1
30	1	1	1	1	1	1
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32	1	1	1	1	1	1
33	1	1	1	1	1	1
34	1	1	1	1	1	1
35	1	1	1	1	1	1
36	1	1	1	1	1	1
37	1	1	1	1	1	1
38	1	1	1	1	1	1
39	1	1	1	1	1	1
40	1	1	1	1	1	1

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41	1	-6.982E-04	9.211E-05	-1.945E-03	6.484E-05	-7.629F-04	-4.935E-05
42	1	-7.759E-04	3.190E-03	-1.816E-03	4.991E-05	5.034E-03	-3.229E-05
43	1	-2.988E-03	5.715E-05	-7.720E-04	3.017E-03	-3.878E-03	-1.327E-03
44	1	-8.125E-04	2.582E-04	-1.923E-03	6.888E-05	-5.812E-04	-2.402E-05
45	1	-7.437E-04	4.499E-05	-1.812E-03	2.878E-05	8.099E-05	-6.206E-05
46	1	1.180E-03	7.288E-04	9.007E-03	3.150E-04	-3.144E-03	1.102E-05
47	1	-1.734E-03	3.805E-04	8.694E-03	3.004E-05	3.822E-04	-1.018E-05
48	1	-1.163E-03	-2.897E-05	8.849E-03	-6.234E-06	1.017E-04	1.583E-05
49	1	2.351E-05	1.070E-03	8.775E-03	1.017E-03	-2.846E-03	-6.244E-04
50	1	-1.634E-03	2.996E-04	8.772E-03	-1.400E-04	3.392E-04	3.095E-05
51	1	-1.187E-03	8.048E-06	8.837E-03	-5.772E-06	4.902E-05	2.741E-05
52	1	-1.099E-03	8.603E-04	8.511E-03	-2.325E-04	-1.371E-03	-5.822E-04
53	1	-1.501E-03	2.813E-04	8.850E-03	-1.066E-04	1.217E-04	2.337E-05
54	1	-1.183E-03	-6.558E-06	8.859E-03	3.599E-05	3.835E-04	3.833E-05
55	1	6.225E-03	5.663E-04	5.652E-03	2.218E-05	-8.265E-03	-2.859E-05
56	1	-4.077E-03	-8.728E-04	4.071E-03	2.350E-03	-1.189E-04	3.350E-04
57	1	2.433E-03	-5.208E-04	4.042E-03	1.271E-03	-1.232E-03	-1.458E-03
58	1	5.737E-03	9.351E-04	5.598E-03	-2.597E-04	-7.753E-03	-7.562E-05
59	1	-3.243E-03	-1.679E-04	3.840E-03	2.248E-04	-6.042E-04	6.074E-05
60	1	2.877E-03	-3.666E-03	3.381E-03	4.606E-04	-1.710E-03	2.116E-04
61	1	1.114E-02	-6.605E-04	3.915E-03	-1.450E-03	4.920E-04	-1.646E-04
62	1	-3.189E-03	1.185E-03	2.334E-03	1.589E-03	-5.735E-04	-5.572E-04
63	1	1.882E-03	3.604E-03	2.775E-03	-2.488E-04	-1.728E-03	1.289E-04
64	1	9.930E-03	-1.699E-04	3.823E-03	-3.204E-04	2.241E-04	-3.349E-05
65	1	-2.722E-03	3.075E-04	2.278E-03	3.707E-05	-5.415E-04	-1.240E-05
66	1	7.947E-04	5.446E-03	2.546E-03	6.217E-04	-2.102E-03	-8.956E-06
67	1	9.164E-03	-6.032E-04	9.910E-03	-1.504E-04	-2.836E-03	-7.662E-05
68	1	6.653E-04	2.013E-03	8.094E-03	-6.819E-04	1.323E-04	-7.315E-04
69	1	8.324E-03	5.479E-04	8.510E-03	-1.431E-03	1.237E-03	-3.590E-03
70	1	2.939E-04	2.308E-03	7.801E-03	-9.734E-05	2.224E-04	-6.149E-05
71	1	1.256E-03	3.295E-03	8.731E-03	4.791E-04	1.370E-04	-1.380E-04
72	1	2.185E-03	7.080E-03	4.481E-03	-6.823E-05	-1.370E-03	-1.026E-02
73	1	2.354E-03	6.636E-03	4.053E-03	3.816E-03	-3.606E-03	-8.939E-03
74	1	2.896E-03	-2.199E-03	3.630E-03	1.834E-03	-1.384E-03	-9.093E-04
75	1	2.139E-03	-3.069E-03	2.811E-03	-9.141E-04	-1.150E-03	3.317E-04
76	1	2.401E-03	-4.291E-03	2.602E-03	-1.349E-04	-1.053E-03	2.102E-04
77	1	3.389E-04	-3.496E-03	1.748E-03	4.708E-04	8.589E-05	3.438E-04
78	1	-3.412E-04	1.430E-02	3.223E-03	-8.648E-04	-3.187E-03	1.569E-03
79	1	2.535E-04	1.271E-02	2.751E-03	1.007E-02	-3.134E-03	2.588E-03
80	1	1.939E-03	1.706E-03	2.674E-03	2.687E-03	-2.790E-03	2.449E-04
81	1	1.919E-03	-5.360E-04	1.824E-03	1.058E-03	-3.528E-03	-5.440E-04
82	1	2.024E-05	-2.183E-03	1.915E-03	-1.851E-04	-3.336E-03	-1.169E-04
83	1	9.542E-05	-2.588E-03	7.499E-04	-2.752E-04	-4.277E-03	-1.483E-04
84	1	-1.578E-03	1.123E-02	1.079E-02	-9.037E-04	-4.515E-05	1.140E-03
85	1	-9.947E-04	9.773E-03	1.109E-02	8.523E-03	-5.059E-04	2.741E-04

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104	1	9	918E-04	4	427E-03	8	125E-03	2	089E-03	-1	043E-03	-3	918E-03
105	1	1	215E-03	2	393E-03	8	303E-03	-2	377E-03	-2	400E-03	-3	976E-03
107	1	1	374E-03	1	733E-03	8	927E-03	5	122E-05	-1	547E-03	4	278E-05
108	1	5	834E-04	6	373E-04	9	063E-03	7	859E-05	-1	114E-03	1	289E-04
110	1	2	626E-03	6	301E-03	3	568E-03	4	422E-03	-7	001E-03	8	040E-03
111	1	4	838E-03	3	950E-03	2	505E-03	4	286E-03	-7	882E-03	-3	873E-03
113	1	3	212E-03	-2	635E-03	2	068E-03	-4	452E-03	-3	098E-05	1	466E-03
114	1	-2	208E-03	-9	238E-04	1	365E-03	-4	483E-03	3	302E-04	1	159E-03
116	1	-1	164E-03	-1	331E-03	1	201E-03	-1	463E-04	-3	289E-04	1	948E-04
117	1	-5	871E-04	-8	237E-04	7	351E-04	4	137E-04	-7	405E-04	-1	021E-04
119	1	3	985E-03	9	900E-03	2	407E-03	1	589E-02	-1	403E-03	2	914E-03
120	1	7	981E-03	3	817E-03	2	017E-03	1	090E-02	-1	212E-03	1	052E-03
122	1	2	898E-04	-1	274E-03	8	369E-04	-2	725E-03	-4	170E-03	-1	400E-03
123	1	-1	979E-03	-2	458E-04	5	604E-05	-3	162E-03	-4	313E-03	-1	601E-03
125	1	-1	091E-03	-6	559E-04	-3	626E-04	-4	400E-04	-3	913E-03	-2	894E-04
126	1	-1	899E-04	-3	214E-04	-1	162E-03	4	857E-04	-2	784E-03	-5	754E-05
128	1	2	088E-03	6	365E-03	1	094E-02	1	394E-02	-3	342E-04	3	485E-04
129	1	5	475E-03	2	334E-03	1	047E-02	1	070E-02	-2	587E-03	-1	454E-03
131	1	5	310E-04	1	410E-03	8	548E-03	9	506E-04	-2	774E-03	-3	283E-03
132	1	-6	323E-04	1	396E-03	8	693E-03	3	246E-04	-1	883E-03	-1	541E-03
134	1	-6	326E-04	4	356E-04	8	592E-03	6	611E-04	6	157E-04	4	026E-04
135	1	-1	006E-03	2	419E-04	8	555E-03	-3	649E-04	2	745E-04	2	973E-04
139	1	-1	134E-03	-1	530E-04	5	662E-04	-1	536E-03	-7	512E-04	1	631E-04
140	1	-7	916E-04	1	069E-04	-4	270E-04	-6	210E-05	-5	856E-04	-5	074E-05
141	1	-5	311E-04	-1	083E-05	-6	138E-04	6	761E-05	-1	919E-05	-2	994E-05
142	1	-1	505E-03	-2	455E-04	5	458E-04	-1	217E-06	-8	225E-04	5	458E-07
143	1	-7	960E-04	1	047E-04	-4	435E-04	3	527E-06	-5	524E-04	-4	876E-06
144	1	-5	404E-04	-7	028E-06	-6	147E-04	1	023E-05	-1	724E-05	-4	500E-06
148	1	-7	023E-04	1	160E-04	-1	234E-03	-1	029E-03	-2	439E-03	-6	892E-04
149	1	-8	214E-04	1	638E-04	-1	882E-03	4	886E-05	-4	363E-04	-6	357E-05
150	1	-7	674E-04	-4	030E-06	-1	821E-03	3	612E-05	6	344E-05	-1	866E-05
151	1	-1	163E-03	1	580E-04	-1	364E-03	-3	565E-05	-2	332E-03	-1	682E-05
152	1	-8	769E-04	1	636E-04	-1	860E-03	8	251E-06	-4	131E-04	5	679E-06
153	1	-7	752E-04	2	843E-06	-1	825E-03	4	131E-06	6	292E-05	-2	413E-06
157	1	-1	227E-03	6	097E-04	8	643E-03	-1	493E-04	7	561E-05	-1	996E-04
158	1	-1	490E-03	2	814E-04	8	883E-03	-3	224E-05	6	213E-05	4	125E-06
159	1	-1	187E-03	-2	744E-05	8	891E-03	1	419E-05	-1	389E-05	2	854E-05
160	1	-1	425E-03	5	609E-04	8	668E-03	-1	522E-04	-1	876E-04	3	974E-05
161	1	-1	489E-03	2	637E-04	8	903E-03	-3	808E-06	4	720E-05	2	905E-06
162	1	-1	204E-03	-1	882E-05	8	904E-03	3	016E-06	-3	031E-03	1	455E-05
163	1	1	283E-03	1	814E-03	2	006E-03	-8	140E-05	-2	192E-03	2	132E-05
164	1	-3	813E-03	1	301E-03	1	301E-03	1	580E-04	-5	972E-04	8	252E-06
165	1	1	689E-03	1	362E-03	1	694E-03	-1	938E-04	2	418E-03	-1	223E-05
166	1	1	217E-03	1	742E-03	2	115E-03	6	655E-05	-2	195E-03	4	052E-05
167	1	-3	398E-03	1	072E-03	9	692E-04	1	951E-03	-4	711E-04	3	238E-04
168	1	1	605E-03	1	421E-03	1	992E-03	-4	243E-04	2	283E-03	-2	001E-03

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169	1	1	161E-03	1	758E-03	1	904E-03	1	143E-04	-2	113E-03	-2	966E-04
170	1	-2	522E-03	-3	500E-04	1	593E-03	2	675E-03	-1	156E-04	9	529E-04
171	1	1	205E-03	2	387E-03	1	861E-03	-6	058E-04	5	076E-04	-1	684E-03
172	1	4	401E-03	1	172E-03	2	346E-03	9	760E-05	-3	224E-03	2	281E-04
173	1	-4	475E-03	1	113E-03	3	342E-03	-1	041E-04	-3	695E-04	-5	057E-04
174	1	4	435E-03	5	219E-04	1	880E-03	1	783E-03	2	130E-03	-5	615E-04
175	1	4	197E-03	1	774E-03	2	305E-03	3	844E-04	-2	865E-03	4	461E-04
176	1	-3	964E-03	-7	761E-04	3	694E-03	1	113E-03	-4	797E-04	4	274E-04
177	1	3	831E-03	1	385E-03	3	051E-03	-3	541E-03	3	562E-03	-2	416E-03
178	1	4	184E-03	7	792E-04	2	720E-03	2	793E-05	-2	560E-03	-3	591E-04
179	1	-3	929E-03	1	786E-03	2	573E-03	3	141E-03	-2	556E-04	2	291E-03
180	1	2	354E-03	3	149E-03	1	967E-03	-4	427E-03	6	479E-04	-4	403E-03
190	1	-2	608E-03	1	627E-03	-4	215E-04	2	737E-05	5	929E-04	6	323E-06
191	1	-1	032E-03	1	919E-04	-2	044E-04	-3	064E-05	-3	306E-04	2	867E-08
192	1	-5	286E-04	-2	888E-06	-5	765E-04	1	525E-05	2	511E-05	-1	465E-06
193	1	-2	632E-03	1	325E-03	-3	460E-04	-1	455E-03	6	365E-04	4	290E-04
194	1	-9	989E-04	1	673E-04	-2	286E-04	-6	870E-05	-3	677E-04	-2	872E-05
195	1	-5	464E-04	9	005E-06	-5	806E-04	4	643E-05	4	887E-06	-1	427E-05
196	1	-1	772E-03	3	720E-04	-1	451E-04	-2	470E-03	5	305E-04	4	742E-04
197	1	-9	167E-04	1	695E-04	-2	806E-04	-1	720E-04	-3	589E-04	-3	226E-05
198	1	-5	151E-04	-2	167E-05	-5	938E-04	-2	967E-05	1	613E-06	-2	425E-05
199	1	-2	965E-03	1	917E-03	2	528E-04	-8	258E-06	2	014E-03	-2	765E-05
200	1	-9	842E-04	1	780E-04	-2	523E-04	-2	322E-05	-5	912E-04	8	128E-06
201	1	-5	365E-04	7	372E-06	-5	705E-04	1	858E-05	-4	492E-05	-7	688E-06
202	1	-3	229E-03	1	473E-03	2	834E-04	-1	994E-03	1	876E-03	7	971E-04
203	1	-9	363E-04	1	403E-04	-2	859E-04	-3	332E-05	-5	835E-04	-7	996E-05
204	1	-5	682E-04	1	332E-05	-5	684E-04	4	885E-05	5	435E-05	-1	795E-05
205	1	-2	564E-03	3	139E-04	4	020E-04	-2	867E-03	1	085E-03	8	195E-04
206	1	-8	828E-04	1	825E-04	-3	593E-04	-1	042E-04	-4	804E-04	-1	048E-04
207	1	-5	340E-04	-2	788E-05	-5	764E-04	2	829E-05	2	828E-05	-1	269E-05
220	1	1	191E-03	1	577E-03	1	853E-03	2	059E-04	-1	843E-03	1	631E-04
221	1	-1	991E-03	-8	468E-04	1	908E-03	1	664E-03	-2	472E-04	-6	216E-05
222	1	2	162E-03	-1	457E-03	8	659E-04	1	126E-03	-1	010E-03	-1	573E-03
223	1	1	155E-03	1	653E-03	1	897E-03	-2	323E-06	-1	891E-03	-2	030E-05
224	1	-1	374E-03	-1	344E-03	1	810E-03	1	312E-04	-2	813E-04	7	301E-07
225	1	2	088E-03	-2	379E-03	3	287E-04	-9	895E-06	-9	844E-04	9	140E-05
229	1	4	081E-03	1	327E-03	2	553E-03	2	080E-04	-2	209E-03	4	071E-05
230	1	-2	874E-03	-6	385E-04	2	683E-03	1	947E-03	-1	949E-04	4	914E-04
231	1	2	602E-03	-1	821E-04	1	276E-03	6	349E-04	-2	019E-03	9	993E-04
232	1	3	979E-03	1	313E-03	2	528E-03	2	671E-05	-2	042E-03	1	269E-04
233	1	-2	250E-03	-1	318E-03	2	839E-03	1	244E-04	-4	654E-04	-8	560E-05
234	1	2	554E-03	-3	310E-03	1	772E-03	1	965E-04	-1	233E-03	1	751E-04
245	1	1	593E-03	1	896E-03	1	653E-03	-2	573E-03	-1	865E-03	-5	007E-03
246	1	3	631E-03	1	846E-03	3	808E-05	4	816E-03	-9	996E-04	-1	628E-03
248	1	1	807E-03	-1	214E-04	-6	086E-04	4	491E-04	-1	101E-03	-1	163E-03
249	1	1	584E-03	-1	398E-03	-6	315E-04	1	532E-05	-1	996E-04	2	361E-04

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251	1	1.535E-03	-1	835E-03	6.525E-05	1.003E-04	-1	859E-04	3	550E-04		
252	1	4.756E-04	-1	483E-03	3.672E-04	-4	217E-04	1	108E-04	1	018E-04	
253	1	3.563E-03	3	572E-03	8.503E-04	2	695E-03	9	478E-04	-1	666E-03	
254	1	2.348E-03	4	597E-03	1.161E-03	1	656E-03	-1	799E-03	-3	333E-03	
255	1	2.168E-03	-7	608E-04	1.265E-03	1	644E-03	-9	443E-04	3	485E-03	
256	1	1.874E-03	-1	855E-03	9.640E-04	-5	556E-04	1	191E-03	3	260E-03	
257	1	1.988E-03	-3	404E-03	1.305E-03	-4	305E-04	1	198E-04	1	427E-04	
258	1	3.737E-04	-2	125E-03	9.866E-04	-7	457E-05	3	455E-04	2	644E-04	
259	1	1.281E-03	4	444E-03	-1	780E-03	-2	780E-03	-1	707E-03	-1	258E-03
260	1	3.142E-03	4	276E-04	1.275E-06	3	464E-03	-2	299E-03	-6	782E-04	
261	1	3.549E-04	-1	225E-03	-4	964E-04	-1	651E-03	1	414E-04	5	052E-04
262	1	-1.050E-03	3	592E-05	-4	201E-04	2	070E-03	4	235E-04	6	459E-04
263	1	-4.542E-04	-9	005E-04	4.740E-04	3	156E-04	9	943E-05	-6	293E-05	
264	1	-7.441E-04	-5	009E-04	5.198E-04	-3	780E-04	-1	553E-04	-4	352E-06	
265	1	2.605E-03	4	361E-03	6.754E-04	4	110E-03	-2	925E-03	-2	277E-03	
266	1	3.843E-03	3	361E-03	2.095E-04	2	777E-04	-2	411E-03	-3	825E-04	
267	1	1.331E-04	-1	325E-03	6.801E-04	-3	090E-03	1	637E-03	3	123E-03	
268	1	-1.474E-03	-5	895E-04	7.325E-04	-2	684E-03	1	719E-03	1	775E-03	
269	1	-7.112E-04	-9	458E-04	7.558E-04	1	268E-04	-6	859E-05	1	080E-04	
270	1	-6.267E-04	-6	270E-04	4.250E-04	2	474E-04	-7	462E-04	1	793E-04	
271	1	-1.030E-03	-5	945E-05	2.362E-04	1	096E-03	-2	675E-04	2	865E-04	
272	1	-7.981E-04	8	361E-05	-3.606E-04	-8	065E-05	-3	564E-04	-2	893E-05	
273	1	-5.069E-04	-1	356E-05	-5.828E-04	2	778E-05	3	159E-05	-1	615E-05	
274	1	-9.550E-04	-2	002E-04	1.159E-04	1	148E-05	-3	428E-04	1	675E-05	
275	1	-7.931E-04	9	442E-05	-3	734E-04	-2	275E-05	-3	528E-04	-3	543E-06
276	1	-4.951E-04	-2	832E-05	-5	949E-04	6	528E-06	1	158E-05	-2	342E-06
277	1	-1.040E-03	-1	188E-04	3.477E-04	-1	346E-03	-6	125E-04	2	689E-04	
278	1	-8.128E-04	1	092E-04	-3	794E-04	-6	612E-03	-4	725E-04	-3	051E-05
279	1	-5.355E-04	-1	610E-05	-5	966E-04	3	276E-05	-2	327E-05	-3	453E-05
280	1	-1.234E-03	-2	045E-04	3.401E-04	-2	287E-05	-3	545E-04	-9	798E-05	
281	1	-8.014E-04	9	718E-05	-4	036E-04	-2	625E-06	-4	547E-04	1	595E-05
282	1	-5.276E-04	-1	675E-05	-5	989E-04	5	085E-06	5	666E-05	-1	577E-05
283	1	1.980E-03	2	465E-04	9.086E-03	2	744E-04	3	582E-03	4	221E-05	
284	1	-2.152E-03	3	236E-03	8.833E-03	-5	228E-04	-4	172E-04	-3	328E-04	
285	1	1.523E-03	-3	236E-03	1.045E-02	-2	384E-03	-3	300E-03	1	520E-03	
286	1	1.725E-03	6	534E-04	9.083E-03	5	402E-04	3	537E-03	-9	686E-05	
287	1	-6.024E-05	-5	131E-04	8.859E-03	2	194E-03	-3	588E-04	7	900E-04	
288	1	1.245E-03	2	940E-03	8.535E-03	-7	807E-03	-2	236E-03	2	054E-03	
289	1	1.977E-03	3	988E-04	9.079E-03	9	874E-04	3	524E-03	-2	777E-05	
290	1	-2.514E-04	9	931E-05	8.540E-03	-9	995E-04	-5	836E-04	9	284E-04	
291	1	-7.220E-04	4	253E-03	5.488E-03	-3	880E-04	-1	920E-03	3	689E-03	
292	1	1.847E-04	8	876E-04	2.269E-03	3	350E-04	2	557E-03	-3	875E-05	
293	1	-5.089E-03	2	072E-03	1.122E-03	5	845E-04	1	000E-03	1	057E-04	
294	1	1.480E-04	-2	213E-03	1.620E-03	-1	446E-03	-4	970E-04	-2	061E-04	
295	1	-1.225E-04	1	305E-03	2.256E-03	9	084E-03	-2	592E-03	8	148E-05	
296	1	-2.818E-03	-6	584E-04	8.807E-04	3	683E-03	7	348E-04	2	437E-04	

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339	1	7	773E-04	2	543E-03	1	641E-03	-5	685E-03	-6	238E-04	1	54E-03
340	1	-9	117E-05	1	255E-03	2	168E-03	5	056E-04	2	652E-03	7	527E-05
341	1	-1	794E-03	-7	149E-04	5	135E-04	9	380E-04	2	308E-04	7	444E-04
342	1	-3	653E-04	3	225E-03	1	568E-03	1	119E-03	2	850E-04	1	450E-03
343	1	3	771E-05	1	664E-03	2	144E-03	1	516E-04	1	886E-04	3	094E-05
344	1	-5	215E-03	1	832E-03	2	147E-03	-2	499E-04	7	731E-04	6	639E-05
345	1	2	111E-04	2	309E-04	2	004E-03	-8	295E-04	1	210E-03	8	614E-04
346	1	-1	438E-04	1	830E-03	2	151E-03	-2	743E-05	2	109E-04	-5	374E-05
347	1	-4	011E-03	2	484E-04	2	160E-03	3	140E-03	3	240E-04	-5	007E-04
348	1	6	784E-04	2	050E-03	1	950E-03	-2	246E-03	-1	689E-03	1	687E-03
349	1	-2	894E-04	2	050E-03	2	179E-03	2	005E-04	1	241E-04	-8	798E-05
350	1	-2	731E-03	-7	104E-04	2	117E-03	2	385E-03	-1	929E-04	-5	146E-05
351	1	8	534E-04	1	984E-03	1	776E-03	8	801E-04	1	154E-03	2	021E-03
352	1	2	269E-03	-9	335E-05	9	103E-03	6	232E-04	3	464E-03	-7	667E-06
353	1	-8	987E-04	6	393E-04	8	367E-03	-6	723E-04	-2	526E-04	5	244E-04
354	1	-2	285E-04	1	767E-03	8	552E-03	5	700E-04	-6	867E-04	2	072E-03
355	1	2	321E-03	-1	773E-04	9	117E-03	1	375E-05	3	445E-03	1	533E-05
356	1	-1	121E-03	8	084E-04	8	295E-03	5	726E-07	-2	548E-04	-4	590E-07
357	1	1	475E-04	7	238E-04	8	478E-03	1	309E-04	-1	358E-04	-1	372E-05
358	1	1	390E-04	7	928E-04	2	137E-03	3	435E-04	2	719E-03	3	173E-05
359	1	-1	754E-03	-1	939E-04	2	352E-04	3	604E-04	4	068E-04	5	484E-04
360	1	1	369E-04	-3	032E-04	8	370E-04	1	540E-03	8	275E-04	1	252E-03
361	1	1	584E-04	7	188E-04	2	099E-03	1	813E-05	2	722E-03	2	964E-05
362	1	-1	648E-03	-4	107E-05	1	130E-04	2	261E-05	3	888E-04	2	486E-05
363	1	5	079E-04	-1	756E-03	5	372E-04	5	698E-05	1	382E-03	3	586E-05
364	1	-1	957E-04	1	516E-03	2	175E-03	2	083E-04	4	405E-06	-9	169E-05
365	1	-2	221E-03	-9	007E-04	2	143E-03	1	300E-03	4	993E-05	1	314E-04
366	1	1	070E-03	-2	029E-03	1	709E-03	1	739E-03	1	515E-03	6	015E-04
367	1	-2	130E-04	1	473E-03	2	183E-03	2	401E-05	-3	440E-05	1	316E-05
368	1	-1	843E-03	-1	167E-03	2	135E-03	4	980E-05	2	537E-04	1	988E-05
369	1	1	444E-03	-3	408E-03	1	646E-03	3	523E-05	1	596E-03	-2	949E-05
370	1	3	582E-04	2	503E-03	8	962E-03	1	102E-03	-4	138E-05	3	863E-03
371	1	-2	512E-04	2	610E-03	9	188E-03	1	338E-03	1	868E-03	3	572E-03
372	1	3	626E-04	4	461E-04	8	783E-03	6	450E-04	5	454E-04	1	626E-03
373	1	-6	684E-04	2	791E-04	9	039E-03	1	942E-04	1	674E-03	1	393E-03
374	1	1	429E-04	-2	257E-04	8	657E-03	-2	079E-05	7	396E-04	-8	969E-05
375	1	1	113E-03	-2	211E-04	9	164E-03	5	858E-05	2	051E-03	-2	420E-04
376	1	1	287E-03	9	024E-04	1	582E-03	2	189E-03	1	729E-03	1	842E-03
377	3	1	711E-03	4	804E-04	1	103E-03	4	957E-04	3	215E-03	2	410E-03
378	3	1	043E-03	-1	988E-03	6	037E-04	-1	322E-03	2	439E-03	1	326E-03
379	3	1	7	438E-04	-1	992E-03	-5	307E-04	3	333E-03	1	543E-03	
380	3	1	7	64E-04	-2	223E-03	7	452E-06	-1	512E-04	2	924E-03	
381	3	1	5	454E-04	-1	088E-03	-1	428E-03	-8	468E-06	2	813E-03	
382	3	1	1	984E-03	6	717E-04	1	575E-03	2	255E-03	1	985E-03	
383	3	1	2	152E-03	1	846E-04	1	454E-03	6	440E-04	1	501E-03	
384	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
385	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
386	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
387	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
388	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
389	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
390	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
391	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
392	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
393	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
394	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
395	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
396	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
397	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
398	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
399	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
400	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	
401	3	1	1	731E-03	-3	335E-03	1	571E-03	4	400E-04	1	601E-03	

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402	1	6.140E-04	-3.128E-03	1.500E-03	-1.475E-03	1.370E-03	-2.295E-04
404	1	1.196E-03	-3.434E-03	1.512E-03	-1.623E-04	1.485E-03	-2.073E-05
405	1	1.742E-04	-2.267E-03	1.457E-03	-5.720E-03	1.541E-03	-2.558E-05
407	1	1.399E-03	4.054E-03	1.020E-02	2.984E-03	3.977E-03	3.300E-03
408	1	3.352E-03	2.173E-03	5.859E-03	4.435E-03	9.739E-03	1.457E-03
410	1	1.568E-03	5.098E-04	1.001E-02	1.624E-04	3.248E-03	1.020E-03
411	1	2.956E-03	6.574E-04	6.444E-03	-2.752E-04	7.029E-03	1.238E-03
413	1	1.240E-03	-1.932E-04	9.494E-03	1.103E-04	3.688E-03	-4.592E-04
414	1	3.064E-03	1.138E-04	6.398E-03	-2.355E-04	5.923E-03	2.148E-05
416	1	1.931E-03	1.890E-03	4.176E-04	3.433E-04	2.950E-03	2.575E-03
417	1	3.415E-03	2.200E-03	6.693E-04	-4.353E-04	6.549E-04	2.638E-03
419	1	6.291E-04	-1.493E-03	-1.369E-03	-2.097E-03	2.250E-03	1.963E-03
420	1	9.594E-04	-6.344E-04	-5.605E-04	-1.805E-03	2.632E-04	1.851E-03
422	1	4.657E-04	-6.511E-04	-1.885E-03	1.586E-04	1.054E-03	8.134E-05
423	1	4.900E-04	-5.238E-04	8.372E-04	5.648E-05	-3.439E-04	1.844E-05
425	1	1.372E-03	1.435E-03	1.347E-03	1.907E-05	1.327E-03	-2.634E-04
426	1	2.064E-05	1.491E-03	1.521E-03	-8.266E-04	8.517E-04	-4.202E-04
428	1	4.407E-04	-2.420E-03	1.313E-03	-2.543E-03	1.513E-03	-1.411E-04
429	1	-1.462E-03	-1.313E-03	1.456E-03	-2.457E-03	9.501E-04	-7.993E-05
431	1	7.855E-04	-1.628E-03	1.200E-03	1.673E-04	1.653E-03	3.779E-05
432	1	9.549E-04	-1.317E-03	1.384E-03	7.019E-05	1.204E-03	3.509E-05
433	1	7.664E-03	2.103E-03	2.473E-03	-1.957E-04	-1.122E-02	-1.653E-06
435	1	7.355E-03	2.264E-03	2.651E-03	3.533E-03	-1.117E-02	-2.653E-03
439	1	1.383E-02	-1.998E-04	1.947E-03	-9.845E-05	8.330E-04	-6.204E-05
441	1	1.292E-02	6.858E-04	1.942E-03	7.672E-03	5.951E-04	1.153E-03
445	1	1.070E-02	-1.534E-03	1.031E-02	-2.774E-04	-8.507E-04	5.393E-05
447	1	9.680E-03	-6.150E-04	1.053E-02	7.062E-03	-9.077E-04	8.723E-05
449	1	1.454E-02	-1.365E-03	3.274E-03	7.216E-05	-7.594E-04	-1.680E-05
471	1	1.444E-02	-1.283E-03	3.231E-03	-1.837E-04	-6.022E-03	6.083E-05
473	1	1.440E-02	-1.387E-03	3.329E-03	6.688E-05	-5.687E-04	2.284E-04
475	1	1.081E-02	-1.749E-03	8.229E-03	6.598E-05	-6.090E-03	-1.343E-04
477	1	1.187E-02	-2.723E-03	8.183E-03	1.014E-03	-6.750E-03	-8.104E-05
479	1	1.161E-02	-2.215E-03	8.009E-03	-4.723E-05	-6.365E-03	2.442E-04
481	1	9.552E-03	-2.440E-03	1.317E-02	2.337E-04	8.081E-03	-1.474E-05
483	1	9.964E-03	-2.030E-03	1.320E-02	7.712E-04	8.050E-03	3.609E-04
485	1	9.983E-03	-2.768E-03	1.352E-02	-4.726E-04	8.011E-03	-9.755E-04
487	1	5.309E-03	7.431E-03	3.679E-03	-1.081E-02	-4.443E-04	-3.181E-03
489	1	1.171E-02	-7.511E-05	4.212E-03	-1.402E-02	7.415E-04	-5.435E-04
491	1	1.413E-02	1.349E-03	2.476E-03	-1.906E-04	9.236E-04	1.075E-04
493	1	3.222E-03	5.240E-03	9.256E-03	-1.336E-02	5.348E-03	-1.173E-03
495	1	7.552E-03	2.113E-03	9.177E-03	1.329E-02	4.947E-03	-5.257E-03
497	1	1.335E-02	-4.908E-03	7.715E-03	-2.795E-03	6.523E-03	1.927E-05
499	1	5.514E-03	-1.978E-03	1.419E-02	-9.455E-03	-3.435E-03	5.263E-03
501	1	6.520E-03	3.616E-03	1.164E-02	1.813E-03	-7.091E-03	7.910E-03
503	1	1.279E-02	7.699E-03	6.981E-03	2.174E-02	-3.985E-03	5.598E-03
505	1	-7.390E-04	1.325E-02	4.666E-03	7.722E-03	-5.318E-04	-2.870E-04



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507 1 1 911E-04 9 645E-03 5 249E-03 -1 062E-02 2 611E-04 -4 036E-03
511 1 -1 445E-03 8 837E-03 8 516E-03 6 199E-03 -2 250E-03 -3 579E-03
513 1 -2 089E-03 1 335E-02 8 693E-03 2 601E-03 1 690E-03 -5 038E-03
517 1 -4 195E-04 5 507E-03 1 412E-02 1 466E-03 1 404E-03 3 660E-03
519 1 -1 069E-03 1 024E-02 1 297E-02 4 718E-03 2 796E-04 1 328E-02
523 1 9 441E-03 4 049E-03 3 831E-03 1 359E-02 -9 914E-04 -2 075E-04
525 1 2 359E-03 9 807E-03 4 180E-03 1 516E-02 -1 049E-03 -1 561E-03
529 1 6 597E-03 2 592E-03 7 658E-03 1 282E-02 -6 334E-03 -2 379E-03
531 1 2 038E-03 7 707E-03 8 143E-03 1 294E-02 -4 838E-03 -5 566E-03
535 1 5 810E-03 2 545E-03 1 386E-02 1 049E-02 8 734E-03 5 463E-03
537 1 2 378E-03 7 138E-03 1 283E-02 1 146E-02 6 327E-03 1 017E-02
541 1 1 516E-02 -1 572E-03 2 545E-03 3 316E-04 -8 656E-04 -1 587E-05
542 1 2 106E-03 2 362E-03 1 251E-04 -1 513E-04 -3 131E-03 2 605E-05
543 1 1 340E-02 1 462E-05 2 675E-03 1 034E-02 -9 081E-04 -2 113E-04
544 1 2 263E-03 2 006E-03 3 311E-04 2 030E-04 -2 938E-03 -9 758E-04
547 1 1 119E-02 -2 064E-03 8 053E-03 1 164E-04 -7 814E-03 -8 860E-05
548 1 5 396E-03 2 070E-03 1 564E-04 7 523E-05 -4 321E-03 3 523E-05
549 1 9 817E-03 -7 069E-04 8 158E-03 8 139E-03 -8 078E-03 -1 543E-03
550 1 5 298E-03 2 214E-03 8 309E-05 2 242E-03 -3 785E-03 -6 995E-04
553 1 9 967E-03 -1 337E-03 1 363E-02 4 097E-04 1 121E-02 6 487E-05
555 1 8 696E-03 3 007E-04 1 345E-02 6 252E-03 1 086E-02 3 378E-03
579 1 1 452E-02 -1 398E-03 3 340E-03 -1 183E-04 -7 532E-04 -2 555E-05
581 1 1 440E-02 -1 506E-03 3 319E-03 -7 351E-05 -5 342E-04 -2 578E-05
585 1 1 158E-02 -2 608E-03 8 059E-03 2 725E-04 -6 412E-03 -3 273E-05
587 1 1 177E-02 -2 719E-03 8 044E-03 -1 035E-04 -6 564E-03 -5 354E-05
591 1 9 748E-03 -2 263E-03 1 361E-02 -9 523E-04 7 963E-03 1 231E-04
593 1 9 164E-03 -2 552E-03 1 377E-02 4 065E-05 8 009E-03 6 355E-05
613 1 1 086E-02 -1 932E-03 1 117E-02 3 756E-04 1 012E-03 3 535E-05
615 1 1 119E-02 -2 470E-03 1 113E-02 3 821E-05 9 977E-04 -1 036E-04
617 1 1 114E-02 -2 576E-03 1 113E-02 3 821E-05 9 977E-04 -1 036E-04
619 1 1 395E-02 -1 071E-03 2 906E-03 -2 516E-04 1 139E-03 3 738E-05
621 1 1 428E-02 -1 556E-03 2 904E-03 3 011E-04 1 110E-03 -1 920E-06
623 1 1 420E-02 -1 635E-03 2 911E-03 -1 644E-04 1 130E-03 1 167E-05
625 1 1 407E-02 -3 884E-04 2 217E-03 -9 055E-05 8 837E-04 3 670E-05
627 1 1 425E-02 -6 169E-04 2 216E-03 2 072E-04 9 384E-04 -2 178E-05
629 1 1 422E-02 -7 261E-04 2 208E-03 -7 670E-07 9 077E-04 -2 203E-05
631 1 1 554E-03 7 752E-03 1 133E-02 -1 089E-02 -1 136E-03 -2 661E-05
633 1 7 888E-03 8 148E-03 4 073E-03 -7 813E-03 -1 193E-03 1 128E-03
635 1 4 661E-03 9 480E-03 1 433E-02 4 487E-03 -2 754E-03 -1 708E-02
637 1 4 011E-03 1 090E-02 1 647E-03 -1 390E-02 1 000E-03 1 415E-03
639 1 8 696E-03 7 040E-03 3 785E-03 -1 006E-02 -1 344E-04 1 345E-03
641 1 9 937E-03 1 103E-02 1 307E-03 4 765E-03 -1 713E-04 1 296E-03
643 1 4 105E-03 1 068E-02 1 752E-03 -1 471E-02 9 649E-04 2 420E-03
645 1 1 057E-02 5 084E-03 2 212E-03 -1 238E-02 3 502E-04 6 217E-03
647 1 1 280E-02 4 393E-03 2 125E-03 1 727E-03 1 115E-03 8 061E-03
649 1 -3 176E-03 1 082E-02 1 169E-02 7 728E-03 1 332E-03 4 236E-04

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651	1	-3.062E-03	1.137E-02	1.119E-02	-3.563E-03	-2.469E-04	1.210E-03
655	1	-1.137E-03	1.412E-02	1.661E-03	8.427E-03	3.446E-03	4.996E-04
657	1	-1.840E-03	1.518E-02	2.042E-03	-4.077E-03	2.707E-03	1.320E-03
661	1	-5.779E-04	1.411E-02	1.450E-03	7.963E-03	1.856E-03	5.735E-04
663	1	-7.749E-04	1.509E-02	1.619E-03	-3.923E-03	1.518E-03	1.328E-03
667	1	5.133E-03	3.419E-03	1.125E-02	1.259E-02	1.109E-03	-1.966E-03
669	1	6.694E-04	7.314E-03	1.098E-02	1.435E-02	2.972E-03	-9.897E-04
673	1	9.467E-03	5.602E-03	6.217E-03	1.464E-02	3.116E-04	2.197E-03
675	1	3.848E-03	1.018E-02	8.277E-04	1.645E-02	2.154E-03	-1.581E-04
679	1	8.935E-03	4.752E-03	1.152E-03	1.677E-02	2.085E-03	-1.117E-03
681	1	3.458E-03	1.002E-02	1.532E-03	1.653E-02	2.030E-03	-1.213E-04
685	1	8.745E-03	3.204E-03	8.071E-03	-2.725E-03	1.950E-03	-1.135E-02
687	1	8.408E-03	2.704E-03	5.247E-03	8.027E-03	2.301E-03	-4.732E-03
688	1	8.727E-03	1.829E-03	5.744E-03	9.059E-03	4.770E-03	-6.631E-03
691	1	1.263E-02	8.340E-04	8.517E-04	-1.659E-03	-5.353E-04	8.717E-03
692	1	1.002E-02	3.962E-03	1.306E-03	-6.055E-04	-2.003E-04	6.126E-03
693	1	1.238E-02	3.753E-03	1.196E-03	7.922E-03	-1.610E-03	7.063E-03
694	1	4.539E-03	3.493E-03	1.918E-03	6.472E-03	3.707E-04	6.023E-03
697	1	1.500E-02	1.295E-04	1.084E-03	-3.600E-04	5.350E-04	1.227E-03
698	1	6.358E-03	1.807E-03	1.435E-03	1.944E-03	1.199E-03	2.629E-03
699	1	1.397E-02	5.367E-04	1.141E-03	9.884E-03	1.552E-03	-2.039E-03
700	1	3.739E-03	2.463E-03	1.120E-03	2.685E-03	1.012E-03	-1.954E-03
704	1	-1.790E-03	-2.117E-03	8.212E-03	3.380E-03	1.755E-03	1.009E-03
706	1	-1.392E-04	-8.620E-05	7.721E-03	-8.674E-04	-1.515E-03	1.041E-03
708	1	-1.658E-03	5.293E-04	8.123E-03	-3.065E-04	-2.135E-03	2.989E-04
710	1	-7.023E-03	1.534E-04	1.581E-03	3.451E-03	-7.559E-04	-8.537E-04
712	1	-3.717E-03	9.819E-05	3.535E-04	-1.577E-03	7.802E-04	1.909E-03
714	1	-2.023E-03	-1.226E-04	-4.547E-04	-8.492E-04	-2.460E-04	2.386E-03
716	1	-3.815E-03	1.609E-03	-1.315E-04	-1.724E-04	4.305E-03	-1.846E-04
718	1	-3.783E-03	7.238E-04	3.977E-04	-1.385E-03	4.038E-03	-5.997E-04
720	1	-2.112E-03	-3.486E-04	6.552E-04	-1.693E-03	3.865E-03	-3.844E-04
723	1	1.115E-02	-2.550E-03	1.115E-02	2.716E-04	9.509E-04	-3.438E-05
725	1	1.128E-02	-2.652E-03	1.113E-02	4.265E-06	9.860E-04	-4.274E-05
729	1	1.415E-02	-1.529E-03	2.905E-03	1.830E-04	1.081E-03	1.956E-05
731	1	1.425E-02	-1.615E-03	2.913E-03	-5.432E-05	1.112E-03	-1.483E-05
735	1	1.422E-02	-6.784E-04	2.215E-03	7.467E-05	9.646E-04	-1.017E-05
737	1	1.423E-02	-7.466E-04	2.213E-03	-7.882E-05	9.245E-04	-1.401E-05
742	1	-2.009E-03	5.955E-04	8.136E-03	-5.244E-05	-1.707E-03	1.478E-04
744	1	-2.070E-03	5.447E-04	8.128E-03	1.905E-06	-1.402E-03	-4.303E-08
748	1	-8.502E-04	-7.793E-05	7.090E-04	1.798E-04	-5.556E-04	1.270E-03
750	1	-8.037E-04	-2.259E-04	-8.243E-04	6.064E-05	-4.916E-04	1.350E-05
754	1	-1.045E-03	-6.029E-04	5.691E-04	-6.399E-04	3.616E-03	-1.553E-04
756	1	-1.020E-03	-7.220E-04	4.993E-04	6.201E-05	3.484E-03	-2.988E-05
757	1	7.104E-03	-8.286E-05	8.359E-03	-7.410E-04	1.246E-03	1.025E-03
758	1	1.855E-03	6.013E-04	7.981E-03	1.184E-05	1.566E-03	-1.196E-04
759	1	7.015E-03	-2.761E-04	8.590E-03	4.427E-04	1.576E-03	5.946E-04

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760	1	2	026E-03	3	437E-04	7	940E-03	-7	505E-04	8	163E-04	1	200E-04
761	1	7	084E-03	-9	403E-04	8	933E-03	-4	256E-06	1	799E-03	-1	567E-04
762	1	2	238E-03	-1	213E-04	8	038E-03	-3	327E-04	4	424E-04	-1	146E-04
763	1	1	089E-02	-3	293E-04	5	187E-03	1	690E-03	9	135E-04	-2	237E-03
764	1	5	396E-04	3	260E-04	9	333E-04	2	105E-05	6	222E-04	4	616E-04
765	1	1	097E-02	-1	229E-03	6	031E-03	1	569E-03	1	213E-03	2	848E-03
766	1	-3	408E-05	-3	996E-04	2	132E-03	9	373E-04	1	791E-03	8	892E-05
767	1	1	139E-02	-8	573E-04	6	022E-03	-5	377E-04	-3	943E-04	2	992E-04
768	1	-5	368E-04	4	139E-04	1	634E-03	3	285E-04	2	664E-03	4	410E-04
777	1	7	064E-03	-1	121E-03	8	961E-03	-1	390E-04	1	721E-03	1	932E-04
778	1	2	379E-03	-1	140E-04	7	958E-03	-8	258E-05	6	018E-04	-6	469E-05
779	1	7	033E-03	-1	070E-03	8	994E-03	-3	607E-05	1	653E-03	9	580E-06
780	1	2	435E-03	-1	552E-04	7	975E-03	-1	014E-07	6	710E-04	1	028E-03
783	1	1	157E-02	-6	292E-04	5	624E-03	-1	230E-05	-4	371E-04	1	678E-04
784	1	-6	659E-04	3	770E-04	1	642E-03	-4	146E-05	2	469E-03	9	778E-05
785	1	1	155E-02	-7	020E-04	5	751E-03	6	228E-05	-3	388E-04	4	794E-05
786	1	-4	014E-04	2	834E-04	1	643E-03	8	602E-06	2	204E-03	6	806E-06
799	1	1	420E-02	-4	026E-04	1	962E-03	6	112E-05	7	380E-04	-7	641E-06
800	1	4	608E-06	1	975E-03	1	985E-03	-8	445E-05	1	382E-04	3	968E-07
801	1	1	416E-02	-3	656E-04	1	967E-03	-4	498E-05	6	909E-04	-2	094E-06
802	1	-5	903E-05	1	941E-03	1	975E-03	-6	977E-05	1	298E-04	-8	867E-06
803	1	1	416E-02	-4	346E-04	1	977E-03	1	593E-04	7	428E-04	1	443E-06
804	1	-2	319E-04	1	919E-03	1	959E-03	-6	506E-05	1	011E-04	-6	627E-06
805	1	1	427E-02	-1	175E-04	1	425E-03	1	163E-05	9	262E-04	-2	539E-06
806	1	-4	713E-05	2	053E-03	1	811E-03	-7	310E-06	1	506E-04	9	588E-06
807	1	1	433E-02	-1	694E-04	1	425E-03	9	752E-05	9	103E-04	-9	872E-06
808	1	-1	733E-04	2	087E-03	1	804E-03	-1	535E-04	1	611E-04	1	124E-05
809	1	1	434E-02	-2	194E-04	1	411E-03	1	034E-04	8	912E-04	-9	050E-06
810	1	-3	853E-04	2	069E-03	1	843E-03	-1	348E-04	1	508E-04	2	738E-05
823	1	3	982E-03	9	933E-03	1	791E-03	-1	378E-02	1	909E-04	9	816E-04
824	1	1	723E-03	4	666E-04	1	907E-03	1	275E-03	6	427E-04	2	303E-04
825	1	1	127E-02	3	012E-03	1	051E-03	-1	348E-02	-7	727E-04	-1	821E-03
826	1	3	919E-04	1	316E-03	2	012E-03	1	859E-03	5	796E-04	-1	809E-04
827	1	1	517E-02	-4	632E-04	1	456E-03	-2	483E-03	-1	082E-03	2	069E-03
828	1	-3	385E-04	2	552E-03	1	743E-03	-4	674E-04	-1	017E-04	4	032E-05
829	1	3	817E-03	1	074E-02	1	039E-03	-1	526E-02	-8	022E-04	6	810E-04
830	1	2	033E-03	4	694E-04	1	494E-03	1	750E-03	4	850E-05	3	555E-04
831	1	1	096E-02	3	457E-03	1	079E-03	-1	320E-02	-8	990E-04	-2	347E-04
832	1	4	707E-04	1	745E-03	1	629E-03	1	584E-03	-1	890E-04	1	575E-04
833	1	1	513E-02	-1	298E-03	1	426E-03	-3	212E-04	-1	258E-03	-6	026E-04
834	1	-2	570E-04	2	388E-03	1	648E-03	1	965E-04	1	069E-04	1	679E-05
847	1	2	264E-04	1	400E-02	9	123E-04	7	610E-03	1	519E-03	4	426E-04
848	1	2	390E-03	2	670E-04	1	104E-03	5	713E-04	1	094E-03	-7	858E-05
849	1	-1	409E-04	1	445E-02	1	292E-03	-4	499E-03	1	147E-03	4	879E-04
850	1	2	223E-03	2	854E-04	1	477E-03	1	202E-03	1	201E-03	4	406E-04
853	1	8	163E-04	1	437E-02	-6	135E-05	6	896E-03	6	231E-04	1	154E-03

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854	1	2	330E-03	3	496E-04	1	028E-03	-7	487E-04	2	983E-04	3	068E-04
855	1	2	568E-04	1	518E-02	2	735E-04	-3	160E-03	-8	450E-04	1	059E-04
856	1	2	737E-03	2	242E-04	1	102E-03	1	959E-03	6	351E-04	8	154E-04
871	1	9	461E-03	5	177E-03	3	451E-04	1	543E-02	2	004E-03	-4	763E-04
872	1	8	482E-04	1	492E-03	2	191E-04	-1	589E-03	1	236E-03	-5	027E-05
873	1	4	081E-03	1	038E-02	5	759E-04	1	501E-02	1	664E-03	-4	731E-04
874	1	1	872E-03	1	559E-03	6	438E-04	-8	837E-04	1	346E-03	-1	510E-04
877	1	9	701E-03	5	531E-03	-6	297E-04	1	538E-02	1	156E-03	-2	062E-05
878	1	3	890E-04	2	145E-03	3	545E-04	-3	123E-03	5	826E-05	1	308E-04
879	1	4	846E-03	1	031E-02	-2	772E-04	1	413E-02	6	212E-04	7	000E-04
880	1	2	043E-03	7	872E-04	8	138E-04	-6	492E-04	2	171E-04	3	703E-04
885	1	1	983E-02	-1	089E-04	-3	486E-04	-2	444E-04	1	365E-03	-1	717E-04
896	1	4	757E-03	2	591E-03	-3	492E-04	1	230E-04	1	590E-03	-6	112E-04
897	1	1	391E-02	1	696E-03	-2	230E-04	9	524E-03	1	552E-03	-7	349E-04
898	1	3	163E-03	2	675E-03	-1	207E-04	6	898E-04	1	414E-03	-3	275E-04
901	1	1	541E-02	2	348E-04	-4	136E-04	-4	398E-05	1	108E-03	-6	909E-07
902	1	2	179E-03	2	840E-03	3	879E-05	2	738E-04	3	604E-04	9	595E-05
903	1	1	378E-02	1	863E-03	-4	365E-04	9	183E-03	1	362E-03	-2	417E-04
904	1	1	703E-03	2	674E-03	8	102E-05	-7	335E-04	2	544E-04	-1	267E-04
920	1	-3	079E-03	1	336E-03	1	737E-04	-8	374E-05	9	429E-05	5	158E-05
922	1	-2	709E-03	1	014E-03	1	395E-04	-1	756E-03	1	960E-04	1	690E-05
924	1	-1	527E-03	2	125E-04	1	052E-04	-2	092E-03	2	441E-04	1	638E-05
926	1	-3	022E-03	1	478E-03	-9	902E-05	-8	864E-05	-1	146E-04	-1	511E-05
928	1	-2	765E-03	1	107E-03	-7	515E-05	-1	594E-03	-1	632E-04	1	399E-05
930	1	-1	626E-03	2	937E-04	-3	163E-05	-1	895E-03	-1	888E-04	-4	524E-05
945	1	1	425E-02	-4	643E-04	1	971E-03	-5	399E-05	6	977E-04	7	191E-07
946	1	-2	560E-04	1	799E-03	1	967E-03	7	675E-05	1	009E-04	-1	382E-05
947	1	1	415E-02	-5	221E-04	1	971E-03	-7	272E-05	7	364E-04	-1	841E-06
948	1	-2	961E-04	1	816E-03	1	974E-03	3	675E-05	7	256E-05	-1	104E-06
951	1	1	440E-02	-2	506E-04	1	409E-03	-4	609E-06	9	381E-04	-1	871E-05
952	1	-4	443E-04	1	985E-03	1	859E-03	-2	385E-06	1	385E-04	3	395E-05
953	1	1	433E-02	-3	135E-04	1	406E-03	-9	091E-05	8	804E-04	1	661E-06
954	1	-4	987E-04	2	013E-03	1	871E-03	4	221E-05	1	510E-04	-1	107E-06
969	1	-9	903E-04	-1	003E-03	4	186E-04	-2	723E-03	1	151E-03	-2	311E-04
970	1	-6	803E-04	-1	499E-04	9	228E-05	-8	935E-04	2	524E-04	1	477E-06
971	1	-4	143E-04	-8	547E-04	2	000E-04	6	098E-06	1	206E-03	2	662E-05
972	1	-6	547E-04	-3	068E-04	1	348E-04	-1	092E-05	2	046E-04	8	958E-07
975	1	-8	487E-04	-7	138E-04	3	098E-04	-2	372E-03	4	253E-04	-5	157E-04
976	1	-8	515E-04	-6	952E-05	3	216E-05	-8	705E-04	-4	978E-05	3	576E-05
977	1	-4	430E-04	-5	079E-04	7	038E-04	1	010E-04	-4	305E-05	2	442E-05
978	1	-9	130E-04	-1	867E-04	6	626E-05	1	881E-05	-6	564E-05	-6	435E-06
995	1	-4	642E-03	1	260E-03	1	916E-03	1	996E-04	2	562E-04	-2	084E-05
998	1	-4	228E-03	8	436E-04	1	948E-03	2	341E-03	1	792E-04	-1	279E-04
1001	1	-2	978E-03	-5	765E-04	2	072E-03	3	334E-03	1	187E-04	-1	383E-04
1004	1	-4	545E-03	1	417E-03	1	744E-03	1	473E-05	6	033E-05	-4	537E-07
1007	1	-4	082E-03	7	384E-04	1	802E-03	2	427E-03	1	106E-04	-1	862E-05

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1010	1	-2	825E-03	-3	804E-04	1	749E-03	3	211E-03	1	003E-04	-9	374E-05
1022	1	-4	654E-04	1	886E-05	-7	454E-04	1	651E-05	-9	036E-04	1	584E-05
1023	1	-3	285E-04	4	037E-05	-6	461E-04	1	487E-05	-1	564E-05	-6	772E-06
1025	1	-4	918E-04	9	572E-05	-7	358E-04	3	649E-05	-8	096E-04	5	935E-05
1026	1	-3	288E-04	1	161E-05	-6	429E-04	5	622E-05	-1	222E-05	-1	348E-05
1028	1	-5	122E-04	1	557E-04	-7	004E-04	2	703E-05	-6	521E-04	7	090E-05
1029	1	-3	220E-04	-2	502E-05	-6	355E-04	2	884E-05	-1	307E-05	-1	211E-05
1031	1	-3	740E-04	1	001E-04	-5	550E-04	-1	196E-05	5	386E-04	-1	108E-05
1032	1	-3	611E-04	3	302E-05	-6	297E-04	8	413E-06	7	516E-05	8	252E-06
1034	1	-3	915E-04	8	008E-05	-5	422E-04	8	995E-06	4	690E-04	3	039E-05
1035	1	-3	690E-04	1	931E-05	-6	321E-04	1	981E-05	6	440E-05	1	089E-05
1037	1	-4	394E-04	1	146E-04	-5	236E-04	-3	842E-05	3	574E-04	3	774E-05
1038	1	-3	478E-04	-1	962E-05	-6	336E-04	-1	876E-05	4	598E-05	1	625E-05
1040	1	-8	075E-04	1	469E-04	-3	434E-04	-2	732E-06	2	171E-04	5	818E-06
1041	1	-4	726E-04	1	191E-05	-5	796E-04	1	145E-05	-1	067E-04	-5	532E-07
1043	1	-7	966E-04	1	304E-04	-3	535E-04	-3	447E-05	1	820E-04	4	107E-05
1044	1	-4	785E-04	1	527E-05	-5	815E-04	4	045E-05	-8	022E-05	-8	300E-06
1046	1	-7	741E-04	1	521E-04	-3	692E-04	-9	502E-05	9	060E-05	8	344E-05
1047	1	-4	476E-04	-2	192E-05	-5	928E-04	-2	156E-05	-6	182E-05	-2	009E-05
1070	1	-2	008E-03	-1	239E-03	2	098E-03	1	992E-03	1	029E-04	-2	301E-05
1071	1	1	609E-03	-3	126E-03	1	848E-03	1	704E-03	9	125E-04	3	155E-05
1073	1	1	423E-03	-1	736E-03	2	100E-03	6	653E-05	1	678E-04	-1	524E-06
1074	1	1	766E-03	-4	074E-03	1	755E-03	-3	326E-05	1	002E-03	-5	730E-06
1079	1	-1	770E-03	-1	086E-03	1	762E-03	1	972E-03	5	697E-05	-6	434E-05
1080	1	1	795E-03	-3	169E-03	1	453E-03	1	754E-03	1	619E-04	-1	870E-05
1082	1	-1	148E-03	-1	615E-03	1	743E-03	8	450E-05	8	403E-05	2	743E-06
1083	1	1	904E-03	-3	833E-03	1	348E-03	-8	454E-05	1	769E-04	-2	529E-05
1106	1	1	826E-03	-3	582E-03	1	489E-03	5	435E-05	9	818E-04	-1	594E-04
1107	1	8	072E-04	-3	045E-03	1	155E-03	-1	977E-03	9	430E-04	-2	788E-04
1109	1	1	209E-03	-3	458E-03	1	365E-03	-1	169E-04	1	017E-03	2	738E-05
1110	1	8	609E-05	-2	115E-03	1	031E-03	-9	195E-05	9	198E-04	-1	203E-05
1115	1	1	952E-03	-3	598E-03	1	234E-03	-3	322E-05	1	421E-04	-2	471E-04
1116	1	8	827E-04	-2	759E-03	8	732E-04	-1	806E-03	-5	161E-04	-5	528E-04
1118	1	1	251E-03	-2	913E-03	9	935E-04	-1	623E-04	-1	881E-04	-8	244E-05
1119	1	2	412E-04	-1	611E-03	5	426E-04	9	192E-06	-2	420E-04	1	331E-05
1142	1	-9	122E-05	-2	228E-03	8	531E-04	-2	739E-03	1	148E-03	-3	318E-04
1145	1	-3	933E-04	-1	323E-03	6	156E-04	1	624E-04	1	351E-03	2	191E-05
1151	1	-9	294E-05	-1	685E-03	5	330E-04	-2	673E-03	-2	785E-04	-6	156E-04
1154	1	-3	503E-04	-8	532E-04	3	206E-04	1	184E-04	-1	658E-04	1	088E-05
1167	1	-4	994E-04	8	091E-05	-6	418E-04	4	995E-05	-5	322E-04	2	380E-05
1170	1	-3	316E-04	-9	692E-06	-6	396E-04	3	893E-05	-1	540E-05	3	177E-06
1172	1	-5	193E-04	8	172E-05	-6	050E-04	-1	297E-05	-4	895E-04	5	665E-06
1173	1	-3	246E-04	-1	852E-05	-6	470E-04	3	357E-06	-1	364E-05	-2	104E-06
1178	1	-4	252E-04	5	705E-05	-5	168E-04	-3	822E-05	2	569E-04	3	178E-05
1179	1	-3	506E-04	-1	850E-05	-6	312E-04	1	082E-05	2	760E-05	8	819E-06
1181	1	-4	384E-04	5	355E-05	-5	256E-04	-7	345E-06	2	226E-04	3	797E-06

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1182	1	-3	520E-04	-2	528E-05	-6	247E-04	5	061E-06	2	052E-05	3	117E-07
1187	1	-7	077E-04	8	276E-05	-3	795E-04	-7	841E-05	5	454E-06	2	204E-05
1188	1	-4	328E-04	-2	098E-05	-6	059E-04	2	719E-05	-4	940E-05	-1	141E-06
1190	1	-6	904E-04	6	318E-05	-3	885E-04	-2	085E-06	-2	378E-05	-3	032E-07
1191	1	-4	242E-04	-2	334E-05	-6	098E-04	2	998E-06	-4	045E-05	2	287E-06
1201	1	1	418E-03	9	642E-04	4	501E-03	-2	556E-04	-2	174E-03	2	539E-04
1202	1	6	467E-03	9	179E-04	4	265E-03	-2	107E-04	-9	133E-03	-1	383E-04
1203	1	1	003E-02	8	731E-04	4	313E-03	-2	875E-03	-8	318E-04	-2	433E-04
1204	1	1	238E-03	5	006E-04	4	313E-03	9	170E-04	1	120E-03	9	905E-04
1205	1	-5	742E-03	1	373E-03	4	384E-03	1	950E-03	-4	502E-04	4	450E-04
1206	1	-4	691E-03	3	468E-03	4	390E-03	-1	904E-03	-9	870E-04	-5	354E-04
1207	1	5	729E-03	3	933E-03	4	976E-03	-8	877E-03	6	901E-03	-3	415E-03
1208	1	1	395E-02	-1	348E-03	3	921E-03	7	416E-03	5	472E-04	-6	454E-04
1209	1	1	097E-03	1	175E-03	4	643E-03	1	172E-03	-1	473E-03	1	436E-04
1210	1	6	350E-03	1	209E-03	5	601E-03	-1	141E-04	-8	790E-03	4	722E-04
1211	1	1	090E-02	-4	530E-04	4	310E-03	2	943E-03	-1	373E-03	1	588E-04
1212	1	8	713E-04	1	810E-03	4	498E-03	-2	382E-03	6	153E-04	-1	210E-03
1213	1	-5	066E-03	-2	689E-04	4	747E-03	3	729E-03	1	000E-04	-5	816E-04
1214	1	-4	412E-03	2	321E-03	4	211E-03	3	732E-04	8	703E-05	-2	334E-04
1215	1	4	262E-03	4	242E-03	5	154E-03	-6	713E-03	4	819E-03	-7	266E-03
1216	1	7	773E-03	4	056E-03	3	514E-03	-9	001E-03	-4	910E-04	-2	251E-03
1217	1	2	381E-04	6	617E-04	4	691E-03	1	431E-03	-1	313E-03	-6	216E-04
1218	1	1	014E-02	-2	317E-04	4	321E-03	-9	089E-04	-7	930E-04	3	077E-04
1219	1	9	821E-04	2	419E-03	4	494E-03	-1	804E-03	1	542E-04	-2	683E-03
1220	1	-3	629E-03	8	932E-03	4	132E-03	2	982E-03	-3	398E-04	-7	735E-04
1221	1	4	026E-03	8	932E-03	3	148E-03	1	029E-02	-1	240E-03	-2	161E-03
1222	1	3	837E-03	5	908E-04	3	691E-03	3	738E-03	3	901E-04	-1	210E-06
1223	1	1	181E-02	6	214E-05	4	111E-03	1	087E-03	1	032E-03	-5	545E-05
1224	1	9	926E-03	5	876E-04	6	689E-03	-3	139E-03	-1	839E-03	2	940E-04
1225	1	5	557E-03	5	015E-03	3	512E-03	-3	714E-03	-5	766E-04	7	730E-05
1226	1	-4	624E-03	4	833E-03	3	187E-03	-4	297E-03	-2	553E-04	-1	952E-04
1227	1	-1	348E-03	2	889E-03	5	717E-03	-1	733E-03	7	101E-04	4	125E-04
1228	1	1	226E-02	-1	553E-03	2	985E-03	4	756E-03	1	263E-03	-1	180E-04
1229	1	1	386E-02	-1	652E-03	6	355E-03	6	491E-03	1	390E-03	4	058E-04
1230	1	4	932E-03	3	762E-05	3	574E-03	-2	126E-03	2	645E-04	-2	798E-04
1231	1	1	232E-02	-1	229E-03	4	041E-03	7	768E-04	9	584E-04	-1	750E-04
1232	1	1	117E-02	-1	062E-03	6	778E-03	3	094E-03	-1	413E-03	-2	245E-04
1233	1	9	841E-04	5	451E-03	2	699E-03	-7	325E-04	-8	179E-04	-3	415E-04
1234	1	-3	588E-03	2	546E-03	2	841E-03	1	468E-03	-4	125E-04	-6	724E-04
1235	1	-1	211E-03	2	317E-03	5	068E-03	-9	236E-04	-4	890E-04	-8	741E-04
1236	1	6	587E-03	7	540E-03	2	625E-03	-1	059E-02	-1	740E-03	2	855E-04
1237	1	7	408E-03	3	846E-03	5	967E-03	-8	348E-03	1	886E-03	-4	318E-05
1238	1	3	188E-03	8	385E-04	3	285E-03	6	336E-04	1	988E-05	-4	591E-04
1239	1	1	057E-02	-6	608E-04	6	731E-03	-1	023E-03	-2	538E-03	-4	593E-04
1240	1	1	972E-03	5	458E-03	2	801E-03	-4	306E-03	-1	079E-03	-1	971E-04
1241	1	-8	859E-04	1	938E-03	4	560E-03	1	349E-03	5	221E-04	-8	162E-04

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1242	1	2	987E-03	8	673E-03	6	077E-03	-1	053E-02	6	610E-04	-1	070E-03
1243	1	6	151E-03	4	167E-03	9	312E-03	3	661E-05	-1	175E-03	-4	284E-04
1244	1	9	742E-03	-2	682E-04	1	001E-02	4	481E-04	-1	549E-03	-5	711E-04
1245	1	6	514E-03	-6	420E-04	9	266E-03	-1	085E-04	1	758E-03	-3	888E-04
1246	1	2	327E-03	9	843E-04	8	326E-03	4	493E-04	8	682E-04	5	571E-04
1247	1	9	273E-03	-5	704E-05	1	010E-02	-5	956E-03	8	643E-04	4	126E-04
1248	1	5	840E-03	7	449E-04	8	957E-03	-7	094E-05	-1	564E-03	1	901E-04
1249	1	9	752E-03	-6	724E-04	1	015E-02	4	034E-04	-2	460E-03	-7	928E-04
1250	1	5	068E-03	1	349E-03	9	216E-03	-4	461E-03	2	163E-03	4	810E-04
1251	1	1	944E-03	1	481E-03	7	652E-03	1	079E-04	1	049E-03	-1	456E-06
1252	1	4	884E-03	4	762E-03	1	021E-02	-1	135E-02	1	257E-03	-5	689E-04
1253	1	4	898E-03	7	363E-04	8	794E-03	5	869E-05	-1	900E-03	-4	024E-04
1254	1	2	480E-03	4	423E-03	8	736E-03	-6	071E-03	2	103E-03	-1	374E-03
1255	1	2	465E-03	2	371E-03	1	148E-03	7	103E-05	-1	973E-03	-2	469E-05
1256	1	7	585E-03	2	227E-03	2	549E-03	1	627E-03	-1	122E-02	-1	278E-03
1257	1	1	262E-02	7	773E-04	6	331E-04	2	369E-05	-1	641E-03	1	071E-05
1258	1	-4	431E-03	2	009E-03	1	094E-03	-1	233E-03	1	410E-04	1	932E-04
1259	1	-2	688E-03	1	981E-03	1	144E-03	1	216E-04	-1	818E-03	3	109E-05
1260	1	1	757E-03	2	234E-03	1	214E-03	5	126E-04	-1	824E-03	3	571E-05
1261	1	5	767E-03	3	209E-03	2	692E-03	3	433E-03	-1	013E-02	-3	907E-03
1262	1	1	183E-02	1	606E-03	7	511E-04	6	576E-03	-1	845E-03	3	068E-04
1263	1	-4	021E-03	8	498E-04	9	821E-04	-3	278E-03	2	945E-04	5	538E-04
1264	1	-3	396E-03	1	674E-03	1	093E-03	-1	994E-03	-1	773E-03	-1	660E-04
1265	1	6	710E-05	2	049E-03	1	365E-03	-8	870E-04	-9	220E-04	1	688E-04
1266	1	7	171E-03	4	065E-03	1	239E-02	8	552E-03	-2	218E-03	1	771E-04
1267	1	-3	261E-03	8	050E-05	8	726E-04	-3	614E-03	-1	667E-03	-2	458E-04
1268	1	6	086E-03	8	376E-04	9	911E-04	1	083E-04	-1	646E-03	4	577E-05
1269	1	1	353E-02	2	010E-04	1	941E-03	3	689E-03	7	358E-04	5	425E-04
1270	1	1	197E-02	-8	304E-04	6	130E-03	-2	305E-04	-1	819E-03	-2	943E-05
1271	1	-2	260E-03	1	407E-03	-2	023E-04	-5	001E-04	-4	113E-03	-4	016E-04
1272	1	-4	046E-04	9	976E-04	3	741E-03	2	571E-04	-3	909E-03	2	433E-05
1273	1	4	785E-03	1	189E-03	9	074E-04	2	918E-03	-1	989E-03	8	648E-05
1274	1	1	020E-02	2	279E-03	1	963E-03	8	914E-03	-3	898E-04	1	048E-03
1275	1	1	111E-02	-4	985E-05	6	229E-03	7	136E-03	-1	896E-03	1	489E-04
1276	1	-2	698E-03	7	286E-04	-5	279E-04	-2	172E-03	-4	005E-03	-1	084E-03
1277	1	-1	400E-03	1	146E-03	3	543E-03	-1	924E-04	-3	782E-03	-7	940E-04
1278	1	4	634E-03	1	900E-03	6	676E-04	2	407E-03	-2	931E-03	-2	591E-04
1279	1	4	634E-03	2	974E-03	3	097E-03	1	063E-02	-2	970E-03	-7	647E-04
1280	1	-2	050E-03	4	463E-04	6	311E-03	-1	549E-03	-2	751E-03	-1	022E-03
1281	1	6	070E-03	-3	514E-04	9	747E-03	1	342E-04	-2	535E-03	2	886E-05
1282	1	1	030E-02	-1	123E-03	1	041E-02	3	388E-03	-7	879E-04	-3	746E-06
1283	1	6	110E-04	8	809E-04	8	898E-03	6	781E-04	-3	026E-03	-2	649E-04
1284	1	4	767E-03	3	135E-04	9	712E-03	4	154E-03	-2	496E-03	-4	331E-04
1285	1	7	414E-03	8	710E-04	1	050E-02	8	558E-03	-1	966E-03	-5	963E-04
1286	1	-4	949E-04	1	008E-03	8	641E-03	5	039E-04	-2	062E-03	-6	425E-04
1287	1	2	029E-03	1	620E-03	9	413E-03	4	537E-03	-2	582E-03	-1	200E-03

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1288	1	-2.140E-03	9.159E-04	2.812E-04	7.892E-06	-5.372E-04	1.260E-05
1291	1	-8.256E-04	1.331E-04	-4.457E-04	-9.546E-06	-2.888E-04	1.181E-06
1292	1	-9.667E-04	1.417E-04	-3.263E-04	-2.008E-05	-6.658E-04	-4.363E-05
1293	1	-9.539E-04	1.676E-04	-4.427E-04	-3.190E-05	-8.359E-04	1.208E-06
1294	1	-5.527E-04	-1.497E-05	-5.858E-04	4.941E-05	1.498E-05	-7.894E-06
1295	1	-6.307E-04	-2.295E-05	-5.860E-04	1.567E-05	3.813E-05	-1.046E-05
1296	1	-1.940E-03	7.667E-04	2.353E-04	-9.058E-04	-5.530E-04	9.152E-05
1299	1	-7.930E-04	9.329E-05	-4.547E-04	-6.909E-05	-2.808E-04	-3.197E-05
1300	1	-9.158E-04	1.794E-04	-3.646E-04	-5.809E-05	-6.469E-04	-1.093E-04
1301	1	-8.780E-04	8.669E-05	-4.498E-04	1.541E-06	-8.040E-04	-8.624E-05
1302	1	-5.450E-04	-1.229E-06	-5.921E-04	3.059E-05	-2.391E-05	-1.832E-05
1303	1	-6.722E-04	3.241E-05	-5.984E-04	7.048E-05	3.068E-05	-1.553E-05
1304	1	-1.461E-03	2.206E-04	1.297E-04	-1.060E-05	-6.314E-04	9.689E-05
1306	1	-7.447E-04	9.059E-05	-4.774E-04	-6.818E-05	-2.876E-04	-5.397E-05
1307	1	-9.192E-04	2.450E-04	-4.786E-04	-3.131E-05	-6.747E-04	-1.080E-04
1308	1	-6.244E-04	-4.833E-05	-6.037E-04	-1.753E-05	3.485E-05	-2.516E-05
1309	1	-1.283E-03	5.877E-04	-1.170E-03	1.245E-06	-2.484E-03	-3.546E-05
1312	1	-8.197E-04	1.156E-04	-1.826E-03	1.239E-06	-3.456E-04	6.479E-06
1313	1	-7.392E-04	1.448E-04	-1.946E-03	1.902E-06	-8.288E-04	-2.161E-05
1314	1	-1.200E-03	2.857E-04	2.705E-03	-1.879E-05	-2.131E-04	-2.952E-06
1315	1	-7.487E-04	-1.342E-05	-1.818E-03	3.172E-05	3.262E-05	-2.258E-05
1316	1	-9.350E-04	-3.197E-05	2.882E-03	2.800E-06	5.806E-05	-1.083E-08
1317	1	-1.282E-03	5.553E-04	-1.255E-03	-3.682E-04	-2.346E-03	-4.062E-04
1320	1	-8.130E-04	8.272E-05	-1.825E-03	-2.012E-05	-3.103E-04	-4.266E-05
1321	1	-7.581E-04	1.867E-04	-1.935E-03	6.024E-05	-6.753E-04	-4.567E-05
1322	1	-1.111E-03	1.999E-04	2.736E-03	-1.650E-05	-1.718E-04	-9.746E-06
1323	1	-7.570E-04	3.861E-07	-1.813E-03	1.232E-05	6.801E-05	-4.707E-05
1324	1	-9.781E-04	1.816E-05	2.890E-03	1.877E-05	4.735E-05	2.647E-06
1325	1	-1.073E-03	2.222E-04	-1.429E-03	-4.623E-04	-1.965E-03	-5.862E-04
1327	1	-8.189E-04	1.069E-04	-1.831E-03	-1.448E-06	-2.338E-04	-4.420E-05
1328	1	-1.109E-03	2.690E-04	2.800E-03	1.662E-06	-2.011E-04	5.092E-06
1329	1	-9.654E-04	-2.537E-05	2.908E-03	-3.817E-05	4.097E-05	-1.150E-05
1330	1	-6.265E-04	5.241E-04	8.662E-03	-3.087E-06	-5.803E-04	7.683E-06
1332	1	-1.230E-03	1.550E-04	8.874E-03	1.204E-05	-2.150E-05	-8.190E-07
1333	1	-1.680E-03	3.270E-04	8.733E-03	-8.387E-05	3.593E-04	1.400E-05
1334	1	-1.175E-03	4.150E-07	8.843E-03	-3.728E-06	7.520E-05	1.403E-05
1335	1	-8.867E-04	6.107E-04	8.624E-03	2.404E-04	-3.867E-04	-8.250E-05
1337	1	-1.244E-03	1.415E-04	8.894E-03	1.016E-05	-5.330E-05	-2.051E-05
1338	1	-1.573E-03	3.092E-04	8.811E-03	-1.549E-04	2.291E-04	1.883E-05
1339	1	-1.183E-03	-6.227E-06	8.848E-03	-2.548E-05	2.810E-05	4.051E-05
1340	1	-1.294E-03	5.750E-04	8.656E-03	4.675E-05	-4.723E-05	-4.817E-05
1341	1	-1.288E-03	1.413E-04	8.910E-03	2.833E-05	-5.575E-05	-2.983E-05
1343	1	6.161E-03	7.976E-04	5.537E-03	-1.331E-04	-8.199E-03	6.506E-04
1346	1	-4.264E-03	-6.248E-04	4.447E-03	2.974E-03	-1.901E-04	-6.460E-04
1348	1	2.988E-03	3.020E-03	4.007E-03	-2.353E-03	-2.858E-04	-3.060E-03
1350	1	2.702E-04	2.967E-04	4.477E-03	1.205E-03	-1.067E-03	1.313E-04



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1351	1	3	974E-03	7	389E-04	5	625E-03	-5	341E-05	-8	013E-03	-4	089E-05
1352	1	9	650E-03	-2	085E-04	4	300E-03	-1	037E-05	-5	813E-04	1	016E-04
1353	1	7	599E-04	-1	222E-03	4	006E-03	-1	220E-03	-9	688E-04	-5	740E-04
1354	1	-3	645E-03	-1	309E-03	3	957E-03	1	313E-03	-3	391E-04	1	850E-04
1355	1	-3	489E-03	1	176E-04	4	112E-03	1	791E-03	-5	982E-04	-3	196E-04
1356	1	2	721E-03	-2	121E-03	3	692E-03	5	264E-04	-1	452E-03	-5	574E-04
1357	1	2	224E-03	2	135E-03	3	468E-03	2	586E-04	-1	857E-03	-8	437E-04
1358	1	3	309E-05	1	632E-04	4	362E-03	1	209E-04	-9	604E-04	-1	924E-05
1359	1	8	327E-03	2	124E-04	4	326E-03	-2	024E-04	-4	993E-04	2	902E-05
1360	1	1	356E-03	-3	079E-03	3	572E-03	5	765E-05	-1	496E-03	1	202E-04
1361	1	-2	872E-03	-7	931E-04	4	053E-03	-5	799E-06	-7	903E-04	-1	826E-05
1362	1	2	640E-03	-1	941E-03	3	493E-03	5	146E-04	-1	972E-03	2	473E-05
1363	1	1	163E-02	-1	131E-03	3	941E-03	-1	191E-03	6	300E-04	-1	633E-04
1364	1	-3	303E-03	1	834E-03	2	500E-03	1	993E-03	5	191E-04	-7	506E-04
		2	717E-03	7	384E-03	2	859E-03	-5	370E-03	-1	874E-03	4	055E-04
		2	592E-03	6	727E-04	3	102E-03	8	402E-04	-2	024E-04	-3	147E-04
		1	052E-02	-3	779E-04	3	870E-03	-8	824E-04	3	578E-04	-8	439E-05
		1	011E-02	-5	428E-04	6	677E-03	-9	910E-04	-2	660E-03	-8	123E-05
1375	1	8	922E-04	1	772E-03	2	567E-03	-1	013E-04	-9	470E-04	-2	674E-04
1376	1	-1	945E-03	7	054E-04	2	304E-03	8	216E-04	-5	375E-04	-2	790E-04
1377	1	-1	294E-03	1	682E-03	4	309E-03	5	906E-04	8	469E-05	-8	850E-04
1378	1	2	098E-03	1	126E-03	2	651E-03	9	074E-05	-1	917E-03	4	674E-05
1379	1	1	263E-03	4	312E-03	5	429E-03	-7	370E-04	-3	748E-05	-1	912E-03
1380	1	2	016E-03	6	232E-04	3	003E-03	1	643E-04	-3	037E-04	1	246E-06
1381	1	9	203E-03	-2	704E-04	6	660E-03	-2	669E-04	-2	873E-03	-1	092E-04
1382	1	1	242E-03	1	440E-03	4	114E-03	3	585E-05	1	903E-04	-7	606E-06
1383	1	1	294E-03	-7	848E-04	2	459E-03	6	929E-05	-1	177E-03	-2	497E-05
1384	1	-1	242E-03	1	440E-03	4	114E-03	3	585E-05	1	903E-04	-7	606E-06
1385	1	9	151E-03	-6	066E-04	1	000E-02	-3	759E-05	-2	823E-03	-7	395E-05
1386	1	1	194E-03	1	817E-03	7	858E-03	-7	072E-04	4	596E-04	-1	099E-03
1387	1	1	186E-03	7	011E-03	9	187E-03	-5	683E-03	1	336E-03	-1	978E-03
1388	1	4	416E-03	8	530E-04	8	934E-03	5	836E-05	-2	068E-03	-2	293E-04
1389	1	8	834E-03	-5	125E-04	9	950E-03	-1	101E-04	-2	988E-03	8	913E-07
1390	1	1	213E-03	3	537E-03	8	341E-03	-1	673E-03	1	610E-03	-2	382E-03
1391	1	4	883E-04	2	108E-03	7	942E-03	-3	524E-04	1	738E-04	-4	532E-04
1392	1	1	066E-03	4	199E-03	8	600E-03	-5	124E-04	6	530E-04	-1	822E-03
1393	1	3	951E-03	1	080E-03	8	793E-03	6	790E-05	-2	164E-03	6	637E-05
1394	1	1	170E-03	2	614E-03	8	359E-03	3	930E-05	1	049E-03	-2	406E-04
1395	1	2	627E-03	6	742E-03	4	730E-03	1	734E-03	1	022E-03	-9	776E-03
1396	1	2	334E-03	6	835E-03	4	311E-03	1	535E-03	-2	423E-03	-1	007E-02
1397	1	2	428E-03	3	042E-03	3	609E-03	8	389E-04	-1	670E-03	-3	176E-03
1400	1	5	317E-04	1	323E-02	2	799E-03	-6	634E-04	-2	614E-03	-1	029E-03
1401	1	2	431E-03	2	128E-03	2	705E-03	-2	067E-03	-1	709E-03	-1	055E-03
1402	1	1	206E-03	1	154E-02	2	194E-03	8	775E-03	-2	851E-03	-2	855E-04
1403	1	2	376E-03	-1	169E-03	3	842E-03	1	463E-03	-1	350E-03	-1	145E-03
1404	1	2	529E-03	-2	628E-03	3	224E-03	5	207E-04	-1	284E-03	-2	513E-04
1407	1												

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1408	1	2.402E-03	-2	745E-03	3	014E-03	6	146E-04	-1	164E-03	-3	001E-04
1409	1	2.550E-03	4	839E-04	3	061E-03	2	525E-03	-2	197E-03	-3	366E-04
1410	1	1.057E-03	-2	555E-03	2	175E-03	-5	990E-04	-4	919E-04	-3	097E-04
1411	1	2.241E-03	-1	469E-03	2	619E-03	5	693E-04	-2	121E-03	2	972E-05
1412	1	2.582E-03	-3	934E-03	2	988E-03	1	746E-04	-1	448E-03	2	619E-04
1413	1	1.293E-03	-3	968E-03	2	170E-03	-2	105E-04	-4	330E-04	2	346E-04
1414	1	2.422E-03	-3	074E-03	3	037E-03	-1	272E-04	-2	053E-03	8	654E-05
1415	1	2.817E-04	-3	174E-03	2	329E-03	-2	606E-04	-1	844E-03	4	922E-05
1416	1	1.204E-03	1	287E-02	3	073E-03	-5	819E-03	-2	577E-03	1	073E-03
1420	1	-9.959E-05	1	346E-02	2	992E-03	4	533E-03	-3	230E-03	2	127E-03
1421	1	8.329E-04	7	994E-03	2	956E-03	1	177E-03	-2	965E-03	9	241E-04
1422	1	-9.361E-04	1	249E-02	6	348E-03	-9	709E-04	-1	447E-03	-1	342E-03
1423	1	1.313E-03	5	743E-03	2	305E-03	5	647E-03	-3	271E-03	1	000E-03
1424	1	-3.972E-04	1	097E-02	6	578E-03	8	936E-03	-2	663E-03	-7	862E-04
1425	1	1.750E-03	2	918E-03	2	740E-03	1	164E-03	-2	297E-03	1	902E-04
1428	1	1.928E-03	5	319E-04	2	251E-03	2	045E-03	-3	163E-03	-1	379E-04
1429	1	1.947E-03	-2	291E-04	2	288E-03	9	851E-04	-3	084E-03	4	670E-05
1430	1	1.346E-03	2	907E-03	5	285E-03	2	251E-04	-2	026E-03	-1	833E-03
1431	1	7.796E-04	-1	217E-03	1	270E-03	3	098E-04	-3	962E-03	-3	243E-04
1432	1	1.430E-03	8	564E-04	4	702E-03	1	463E-03	-3	106E-03	-2	267E-03
1433	1	2.042E-03	-1	440E-03	2	336E-03	-1	592E-04	-2	719E-03	-7	380E-05
1435	1	1.133E-03	-2	485E-03	1	235E-03	2	122E-04	-3	797E-03	-1	307E-04
1436	1	1.532E-03	-3	425E-04	4	747E-03	-1	101E-04	-2	712E-03	-2	126E-04
1437	1	2.897E-04	-8	975E-04	3	862E-03	-2	870E-04	-3	115E-03	-1	212E-04
1438	1	-3.214E-04	9	949E-03	1	032E-02	-5	396E-03	-4	902E-04	5	687E-04
1440	1	-1.268E-03	1	036E-02	1	095E-02	3	867E-03	-2	887E-04	6	809E-04
1441	1	-2.690E-04	7	808E-03	9	471E-03	7	355E-04	-4	891E-04	-1	603E-03
1442	1	2.489E-04	6	023E-03	9	713E-03	5	519E-03	-1	427E-03	-2	129E-03
1443	1	8.859E-04	5	027E-03	8	351E-03	2	337E-03	-1	680E-03	-3	995E-03
1445	1	1.135E-03	3	360E-03	8	217E-03	2	274E-04	-1	350E-03	-1	766E-03
1446	1	1.160E-03	3	102E-03	8	513E-03	9	274E-04	-1	350E-03	-1	766E-03
1447	1	7.607E-04	1	575E-03	8	667E-03	1	081E-03	-1	783E-03	-1	646E-03
1448	1	1.380E-03	2	514E-03	8	852E-03	3	201E-04	-8	445E-04	-6	142E-05
1449	1	1.013E-03	1	159E-03	8	993E-03	-3	558E-05	-1	385E-03	4	755E-05
1450	1	2.572E-03	6	515E-03	3	764E-03	5	266E-03	-5	371E-03	-8	249E-03
1451	1	3.665E-03	4	924E-03	3	194E-03	5	801E-03	-8	534E-03	-6	538E-03
1454	1	1.727E-03	1	999E-03	2	228E-03	1	364E-03	-1	640E-03	-4	230E-04
1455	1	4.163E-03	8	579E-03	1	476E-03	1	368E-02	-2	462E-03	1	757E-04
1456	1	1.866E-03	1	241E-03	1	592E-03	-1	007E-04	-1	436E-03	3	606E-04
1458	1	1.029E-03	-2	896E-03	2	432E-03	-2	743E-03	-5	482E-04	8	888E-04
1461	1	-1.014E-03	-1	570E-03	1	736E-03	-4	748E-03	-1	352E-04	1	331E-03
1462	1	-4.913E-04	-1	531E-03	1	498E-03	-1	43E-03	-3	115E-04	5	628E-04
1463	1	3.514E-04	-1	848E-03	2	120E-03	-3	268E-03	-1	914E-03	1	413E-04
1464	1	-1.402E-03	-6	031E-04	9	691E-04	-1	356E-03	-3	811E-04	4	140E-04
1465	1	-2.204E-03	-5	530E-04	1	645E-03	-3	825E-03	-1	758E-03	1	453E-05
1466	1	-3.844E-04	-2	315E-03	1	475E-03	-4	312E-04	-1	489E-04	3	066E-04

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1468	1	-9	290E-04	-1	190E-03	9	576E-04	1	840E-04	-5	029E-04	2	969E-05
1469	1	-1	268E-03	-1	148E-03	1	436E-03	3	682E-04	-1	907E-03	-5	374E-05
1470	1	-5	420E-04	-6	961E-04	6	510E-04	3	132E-04	-1	823E-03	-8	740E-05
1471	1	2	112E-03	1	069E-02	2	583E-03	1	316E-02	-2	371E-03	2	773E-03
1474	1	6	278E-03	6	281E-03	2	205E-03	1	443E-02	-1	184E-03	2	029E-03
1475	1	2	141E-03	3	673E-03	1	668E-03	5	995E-03	-2	952E-03	5	351E-04
1476	1	2	862E-03	7	493E-03	6	535E-03	1	448E-02	-2	484E-03	1	701E-04
1477	1	3	101E-03	1	701E-03	1	092E-03	3	641E-03	-2	760E-03	-3	359E-04
1479	1	1	137E-03	-9	538E-04	1	326E-03	-9	521E-04	-3	653E-03	-9	854E-04
1482	1	-7	029E-04	-5	519E-04	4	625E-04	-3	047E-03	-4	202E-03	-1	470E-03
1483	1	-4	043E-04	-8	254E-04	1	913E-04	-9	954E-04	-3	976E-03	-6	225E-04
1484	1	3	138E-04	6	122E-05	4	045E-03	-1	019E-03	-3	518E-03	-2	487E-03
1485	1	-1	132E-03	-1	921E-04	-5	978E-04	-8	786E-04	-3	321E-03	-7	384E-04
1486	1	-1	231E-03	5	634E-04	3	544E-03	-1	205E-03	-3	246E-03	-1	802E-03
1487	1	-5	276E-04	-1	508E-03	1	852E-04	-5	159E-04	-4	102E-03	-2	276E-04
1489	1	-7	437E-04	-5	796E-04	-7	730E-04	8	434E-05	-3	406E-03	-1	484E-04
1490	1	-7	462E-04	6	138E-06	3	159E-03	-3	897E-04	-2	265E-03	1	758E-05
1491	1	-4	444E-04	5	272E-05	2	858E-03	1	391E-04	-1	336E-03	1	102E-04
1492	1	4	292E-04	8	007E-03	1	103E-02	1	135E-02	-4	788E-04	3	316E-04
1494	1	4	084E-03	4	264E-03	1	080E-02	1	304E-02	-1	127E-03	-5	483E-04
1495	1	1	300E-03	3	880E-03	9	779E-03	7	155E-03	-1	779E-03	-1	932E-03
1496	1	2	61E-03	1	991E-03	9	586E-03	5	728E-03	-2	343E-03	-1	773E-03
1497	1	9	024E-04	1	873E-03	8	418E-03	1	634E-03	-2	611E-03	-3	659E-03
1499	1	-3	314E-05	1	472E-03	8	637E-03	8	145E-04	-2	333E-03	-2	384E-03
1500	1	-4	120E-05	9	304E-04	8	548E-03	6	020E-04	-1	159E-03	-9	752E-04
1501	1	-8	324E-04	7	128E-04	8	618E-03	2	637E-04	-6	327E-04	-3	523E-04
1502	1	-1	533E-05	5	506E-04	8	817E-03	-2	223E-04	-4	787E-04	2	188E-04
1503	1	-9	155E-04	3	278E-04	8	561E-03	-3	147E-04	5	186E-05	3	478E-04
1507	1	-2	753E-03	8	146E-05	7	094E-04	-3	074E-03	-1	877E-04	3	808E-04
1509	1	-1	519E-03	-8	026E-04	9	551E-04	-3	055E-03	-1	997E-04	6	891E-04
1512	1	-1	105E-03	-2	633E-04	5	621E-04	-6	298E-04	-8	211E-04	8	331E-05
1513	1	-1	046E-03	-6	028E-05	4	305E-04	-1	470E-03	-1	686E-03	-2	297E-04
1514	1	-1	084E-03	-5	178E-04	6	711E-04	2	075E-04	-7	657E-04	-6	289E-05
1516	1	-1	459E-03	-8	393E-05	3	472E-04	-9	518E-05	-1	649E-03	2	793E-06
1520	1	-2	200E-03	1	533E-04	-1	013E-03	-2	338E-03	-3	343E-03	-1	048E-03
1522	1	-1	320E-03	-3	077E-04	-5	972E-04	-2	233E-03	-3	549E-03	-1	234E-03
1525	1	-6	978E-04	7	576E-05	-1	296E-03	-3	620E-04	-2	430E-03	-3	383E-04
1526	1	-8	682E-04	3	894E-04	2	977E-03	-4	513E-04	-1	317E-03	-4	918E-04
1527	1	-7	007E-04	-8	047E-05	-1	233E-03	-2	429E-04	-2	595E-03	-3	972E-05
1529	1	-1	210E-03	3	886E-04	2	940E-03	-3	290E-05	-1	223E-03	5	715E-06
1532	1	-1	307E-03	7	408E-04	8	574E-03	-3	499E-04	-7	378E-04	-3	830E-04
1533	1	-9	637E-04	9	508E-04	8	649E-03	1	608E-04	-8	156E-04	-9	717E-04
1535	1	-1	234E-03	5	547E-04	8	655E-03	-1	159E-04	1	935E-05	-9	024E-05
1536	1	-1	214E-03	3	911E-04	8	631E-03	-3	207E-04	2	640E-05	2	172E-04
1541	1	-8	388E-04	1	121E-04	-4	034E-04	-7	962E-05	-5	889E-04	-7	552E-05
1543	1	-5	324E-04	-1	508E-05	-6	081E-04	2	041E-05	-2	419E-05	-2	505E-05

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1545	1	-1.128E-03	7	840E-05	4	186E-05	-5	377E-04	-7	298E-04	-1	761E-06
1546	1	-6.862E-04	3	720E-05	-5	013E-04	-9	330E-05	-2	563E-04	-2	691E-05
1549	1	-7.973E-04	1	393E-04	-4	374E-04	6	437E-06	-5	703E-04	-3	866E-05
1550	1	-8.363E-04	1	399E-04	-5	104E-04	-1	218E-05	-5	664E-04	-6	986E-05
1551	1	-5.324E-04	-1	591E-05	-6	135E-04	3	767E-03	-1	956E-05	-1	184E-05
1552	1	-6.431E-04	-9	937E-06	-6	085E-04	5	340E-05	3	629E-05	-1	733E-05
1553	1	-1.012E-03	2	135E-06	1	519E-05	-1	358E-05	-7	919E-04	1	162E-05
1555	1	-6.540E-04	1	649E-05	-5	145E-04	9	102E-05	-2	464E-04	3	678E-08
1556	1	-8.537E-04	1	357E-04	5	168E-04	9	823E-06	-5	218E-04	-3	485E-06
1557	1	-6.529E-04	-3	323E-06	-6	088E-04	6	916E-06	3	123E-05	-2	082E-06
1562	1	-8.074E-04	1	581E-04	-1	901E-03	5	361E-05	-5	064E-04	-4	910E-05
1564	1	-7.608E-04	-1	048E-05	-1	818E-03	1	826E-06	6	953E-05	-3	896E-05
1566	1	-9.299E-04	2	342E-04	-1	591E-03	-1	350E-04	-1	478E-03	-3	099E-04
1569	1	-8.129E-04	7	258E-05	-1	827E-03	-4	915E-05	-2	077E-04	-4	365E-05
1570	1	-8.536E-04	1	972E-04	-1	872E-03	6	045E-05	-4	246E-04	-1	489E-05
1571	1	-1.128E-03	2	191E-04	2	860E-03	1	357E-05	-1	474E-04	-1	553E-05
1572	1	-7.688E-04	-7	547E-06	-1	823E-03	1	940E-05	6	484E-05	-1	406E-05
1573	1	-9.781E-04	-1	390E-05	2	917E-03	2	365E-05	2	017E-05	9	231E-07
1574	1	-8.694E-04	2	217E-04	-1	648E-03	-2	300E-05	-1	255E-03	-1	977E-05
1576	1	-8.026E-04	5	669E-05	-1	827E-03	-1	433E-05	-1	987E-04	1	216E-06
1577	1	-1.165E-03	2	116E-04	2	886E-03	-1	397E-06	-1	620E-04	5	199E-06
1578	1	-9.891E-04	-6	648E-06	2	920E-03	3	856E-06	1	143E-05	5	793E-06
1582	1	-1.492E-03	2	664E-04	8	866E-03	-5	635E-05	9	396E-05	4	289E-06
1583	1	-1.188E-03	-2	140E-05	8	875E-03	-9	837E-06	-6	872E-06	4	118E-05
1584	1	-1.402E-03	4	585E-04	8	740E-03	-1	458E-05	6	972E-05	3	583E-05
1586	1	-1.313E-03	1	297E-04	8	912E-03	-1	356E-05	-3	953E-05	-2	784E-05
1587	1	-1.491E-03	2	819E-04	8	894E-03	-6	701E-07	5	529E-05	1	769E-05
1588	1	-1.194E-03	-2	263E-05	8	897E-03	9	863E-06	-2	177E-05	1	377E-05
1589	1	-1.436E-03	4	373E-04	8	768E-03	-2	353E-05	1	379E-05	1	268E-05
1590	1	-1.315E-03	1	129E-04	8	914E-03	-4	000E-07	3	442E-06	-1	145E-05
1591	1	7.779E-03	4	255E-04	2	637E-03	-2	718E-05	-1	854E-03	1	643E-05
1592	1	1.449E-02	-1	352E-03	3	232E-03	-8	845E-05	-6	731E-04	1	172E-05
1593	1	1.264E-02	-1	518E-03	5	970E-03	7	957E-05	-2	949E-03	-5	978E-05
1594	1	1.254E-03	1	787E-03	2	062E-03	-1	901E-06	-2	202E-03	5	326E-05
1595	1	2.834E-03	1	383E-03	2	259E-03	-1	859E-06	-2	928E-03	1	034E-04
1596	1	7.808E-03	3	431E-04	2	667E-03	3	034E-04	-1	829E-03	-2	740E-05
1597	1	1.441E-02	-1	275E-03	3	280E-03	-6	744E-05	-6	044E-04	1	553E-04
1598	1	1.311E-02	-2	029E-03	6	015E-03	3	691E-04	-3	174E-03	2	060E-04
1599	1	1.184E-03	1	703E-03	2	010E-03	9	390E-05	-2	135E-03	-1	562E-04
1600	1	2.703E-03	1	751E-03	2	160E-03	2	351E-04	-2	737E-03	9	353E-05
1601	1	7.919E-03	2	640E-04	2	598E-03	3	329E-04	-1	868E-03	-8	444E-05
1602	1	1.297E-02	-1	847E-03	6	017E-03	3	320E-05	-3	070E-03	1	201E-05
1603	1	2.669E-03	1	304E-03	2	169E-03	8	942E-05	-2	423E-03	1	818E-04
1604	1	8.146E-03	-5	437E-04	5	508E-03	-1	449E-05	-5	008E-03	7	325E-05
1605	1	1.130E-02	-2	174E-03	8	209E-03	6	041E-04	-6	409E-03	-4	763E-05
1606	1	1.031E-02	-2	201E-03	1	054E-02	1	450E-04	3	201E-04	-9	605E-05

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1607	1	4	304E-03	1	541E-03	2	322E-03	1	506E-04	-3	050E-03	2	235E-04
1608	1	4	881E-03	1	402E-03	4	526E-03	-4	071E-05	-6	790E-03	6	322E-05
1609	1	8	242E-03	-3	233E-04	5	493E-03	-5	540E-05	-5	091E-03	8	079E-05
1610	1	1	182E-02	-2	549E-03	8	193E-03	4	211E-04	-6	567E-03	1	863E-06
1611	1	1	104E-02	-2	402E-03	1	041E-02	9	363E-04	-2	731E-05	-6	227E-05
1612	1	4	185E-03	1	157E-03	2	515E-03	1	901E-04	-2	707E-03	2	152E-04
1613	1	4	852E-03	1	218E-03	4	600E-03	4	205E-05	-6	766E-03	-1	949E-04
1614	1	8	335E-03	-6	462E-04	5	587E-03	4	584E-04	-5	120E-03	-1	674E-04
1615	1	1	092E-02	-2	520E-03	1	049E-02	-3	173E-04	2	807E-04	1	034E-05
1616	1	4	756E-03	1	173E-03	4	500E-03	2	640E-04	-6	162E-03	9	094E-05
1617	1	6	409E-03	-4	085E-04	1	052E-02	-1	693E-04	-5	652E-03	-1	297E-05
1618	1	9	742E-03	-2	108E-03	1	319E-02	4	570E-04	8	034E-03	5	117E-06
1620	1	6	397E-03	-7	104E-04	1	052E-02	2	877E-05	-5	590E-03	-2	453E-04
1621	1	9	993E-03	-2	630E-03	1	335E-02	-3	630E-05	8	092E-03	-1	474E-04
1623	1	6	801E-03	-6	767E-04	1	032E-02	8	462E-04	-5	411E-03	5	295E-04
1624	1	-1	097E-03	1	338E-03	1	669E-03	6	328E-05	-8	997E-04	-1	729E-05
1627	1	-1	023E-03	1	248E-03	1	466E-03	-1	385E-04	4	614E-04	2	113E-05
1628	1	-3	615E-03	1	197E-03	1	128E-03	1	058E-03	-5	222E-04	1	057E-04
1629	1	-4	087E-03	1	612E-03	1	911E-03	4	417E-05	-5	308E-04	-1	327E-04
1630	1	1	644E-03	1	437E-03	1	880E-03	-1	544E-04	2	416E-03	-9	213E-04
1631	1	3	027E-03	8	290E-04	2	019E-03	7	127E-04	2	499E-03	8	714E-04
1632	1	-1	093E-03	1	198E-03	1	585E-03	6	697E-04	-8	571E-04	2	648E-04
1635	1	-8	448E-04	1	319E-03	1	411E-03	8	578E-04	4	995E-04	-6	087E-04
1636	1	-2	947E-03	4	274E-04	1	280E-03	2	353E-03	-3	336E-04	7	365E-04
1637	1	-3	661E-03	1	330E-04	2	107E-03	1	524E-03	-6	915E-04	9	552E-05
1638	1	1	215E-03	2	118E-03	1	856E-03	-1	059E-03	1	425E-03	-1	983E-03
1639	1	2	747E-03	1	408E-03	2	507E-03	1	970E-03	3	268E-03	-2	654E-03
1640	1	-1	140E-03	7	889E-04	1	785E-03	1	162E-03	-4	308E-04	4	885E-04
1642	1	8	831E-03	4	488E-04	1	702E-03	6	430E-04	-1	483E-04	-2	491E-04
1643	1	-3	200E-03	6	094E-04	1	990E-03	2	893E-03	-8	211E-04	-2	849E-04
1644	1	1	650E-03	2	894E-03	2	025E-03	-2	811E-03	5	765E-04	-3	675E-03
1645	1	-4	322E-04	1	657E-03	2	619E-03	1	981E-05	-5	306E-04	-1	665E-04
1648	1	-5	347E-04	9	707E-04	2	563E-03	8	642E-04	-3	267E-04	7	631E-04
1649	1	-4	218E-03	3	727E-04	3	519E-03	7	721E-04	-4	418E-04	8	484E-05
1650	1	-5	568E-03	1	659E-03	3	842E-03	-3	528E-04	-5	601E-04	-3	245E-05
1651	1	4	114E-03	1	031E-03	2	523E-03	-9	915E-04	3	009E-03	-1	349E-03
1652	1	4	483E-03	2	933E-03	3	496E-03	2	771E-04	-3	731E-03	-1	943E-03
1653	1	-6	968E-04	1	007E-03	2	735E-03	2	771E-04	-3	094E-04	9	923E-05
1656	1	7	594E-05	-1	230E-05	3	185E-03	-4	484E-04	4	611E-04	-4	221E-04
1657	1	-3	957E-03	6	788E-04	3	142E-03	1	906E-03	-3	472E-04	1	248E-03
1659	1	-5	144E-03	2	999E-04	4	266E-03	2	795E-03	4	528E-04	2	420E-03
1659	1	3	294E-03	1	523E-03	2	510E-03	-4	022E-03	1	786E-03	-3	494E-03
1660	1	4	072E-03	2	790E-03	4	310E-03	-4	508E-03	5	207E-03	-4	362E-03
1661	1	-8	926E-04	1	244E-03	2	428E-03	1	570E-03	-7	444E-05	6	308E-04
1663	1	4	345E-04	1	555E-03	2	062E-03	-4	681E-05	-5	545E-04	-5	242E-04
1664	1	-4	361E-03	1	356E-04	4	021E-03	3	516E-03	1	536E-04	1	476E-03

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1665	1	2.694E-03	4.143E-03	3.994E-03	-3.850E-03	2.530E-03	-4.982E-03
1678	1	2.836E-03	5.542E-03	2.712E-03	-5.127E-03	3.137E-04	-2.834E-03
1679	1	9.228E-03	3.380E-03	3.981E-03	-1.521E-02	1.249E-04	-1.774E-03
1680	1	4.244E-03	6.708E-03	6.748E-03	-1.232E-02	1.133E-03	-5.224E-03
1683	1	6.633E-03	6.966E-04	3.133E-03	-7.341E-03	1.874E-03	-1.506E-03
1684	1	1.304E-02	1.121E-04	3.354E-03	-6.747E-03	8.499E-04	-1.196E-04
1685	1	9.705E-03	6.242E-04	7.096E-03	-1.353E-02	3.018E-03	-1.988E-03
1688	1	7.837E-03	1.457E-03	2.107E-03	-7.407E-05	2.005E-03	4.242E-05
1689	1	1.357E-02	-1.495E-03	4.971E-03	-1.337E-03	2.811E-03	1.961E-03
1691	1	2.681E-03	4.426E-03	5.927E-03	-9.524E-03	3.025E-03	-2.583E-03
1692	1	5.352E-03	4.538E-03	8.640E-03	-1.184E-02	5.244E-03	-3.264E-03
1693	1	4.452E-03	1.393E-03	1.147E-02	-1.128E-02	1.751E-03	2.959E-03
1696	1	6.152E-03	1.407E-03	6.317E-03	-8.056E-03	4.255E-03	-3.970E-03
1697	1	1.002E-02	-9.617E-04	8.688E-03	-8.135E-03	5.308E-03	-2.615E-03
1698	1	7.058E-03	3.165E-03	1.010E-02	-5.898E-03	-1.084E-03	-3.501E-04
1701	1	9.259E-03	-2.004E-03	4.850E-03	-4.575E-04	4.618E-03	-1.564E-03
1702	1	1.330E-02	1.117E-03	7.500E-03	9.333E-03	2.398E-03	7.992E-04
1704	1	3.582E-03	1.196E-03	1.095E-02	-5.057E-03	2.694E-03	-7.134E-03
1705	1	5.930E-03	3.945E-03	1.212E-02	-3.622E-03	-4.841E-03	7.529E-03
1707	1	4.477E-03	4.290E-03	9.049E-03	4.009E-04	3.858E-03	-1.422E-03
1708	1	9.375E-03	3.618E-03	9.779E-03	-1.332E-02	-5.759E-03	6.483E-03
1710	1	6.660E-03	9.147E-03	6.375E-03	-8.167E-03	4.757E-03	-7.372E-06
1711	1	1.481E-03	7.280E-03	2.269E-03	6.332E-03	-9.051E-04	-1.481E-03
1712	1	-5.980E-04	1.237E-02	5.005E-03	-4.267E-04	-1.835E-04	-2.156E-03
1713	1	-1.180E-03	1.140E-02	6.985E-03	7.044E-03	-1.908E-03	-2.680E-03
1714	1	2.627E-03	1.974E-03	7.960E-04	1.368E-03	-1.314E-03	-2.699E-03
1715	1	3.112E-03	3.355E-03	3.925E-04	3.564E-03	-8.528E-04	-6.907E-04
1716	1	1.214E-03	4.113E-03	3.575E-03	-7.945E-03	-6.591E-04	-4.817E-03
1717	1	2.097E-03	8.475E-02	4.389E-03	-1.094E-02	9.955E-04	-3.890E-03
1718	1	-9.107E-04	1.063E-02	7.519E-03	-6.845E-03	-1.716E-05	-3.330E-03
1719	1	1.703E-03	1.721E-03	1.844E-03	-5.690E-05	-7.415E-04	-3.804E-03
1720	1	2.565E-03	2.675E-03	1.477E-03	6.165E-06	-2.587E-04	-3.186E-03
1724	1	5.409E-04	7.143E-03	5.174E-03	4.367E-03	-1.863E-03	-2.824E-03
1725	1	-1.379E-03	1.110E-02	8.550E-03	3.278E-03	-5.917E-04	-4.170E-03
1726	1	-9.871E-04	6.798E-03	1.200E-02	3.744E-03	-3.248E-05	1.436E-03
1727	1	2.887E-03	4.117E-03	9.868E-04	2.196E-03	-6.077E-04	-2.028E-03
1728	1	2.360E-03	4.769E-03	3.439E-03	1.874E-03	-2.455E-03	-6.387E-03
1729	1	8.998E-04	7.492E-03	5.025E-03	-1.301E-03	1.290E-03	-3.391E-03
1730	1	1.174E-03	7.741E-03	9.141E-03	-7.926E-03	4.138E-03	-3.173E-03
1731	1	-1.678E-03	1.207E-02	1.082E-02	-3.691E-03	3.979E-04	1.100E-03
1732	1	2.134E-03	4.323E-03	1.476E-03	-3.008E-03	1.105E-03	-3.328E-03
1733	1	3.048E-03	4.271E-03	3.325E-03	1.422E-03	5.381E-05	-5.462E-03
1737	1	9.668E-04	3.928E-03	1.075E-02	1.222E-03	-2.518E-03	-9.081E-03
1738	1	1.688E-04	6.826E-03	1.335E-02	2.631E-03	1.525E-03	9.172E-03
1740	1	8.758E-04	6.458E-03	9.823E-03	-1.835E-03	-6.872E-05	-3.409E-03
1741	1	2.560E-03	3.012E-03	1.406E-02	-9.874E-03	-2.181E-03	8.202E-03

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1744	1	6	847E-03	1	118E-03	1	957E-03	7	914E-03	-2	249E-03	-8	394E-04
1745	1	5	821E-03	7	058E-03	4	019E-03	1	339E-02	-9	842E-04	-9	470E-04
1746	1	7	991E-03	3	276E-03	6	134E-03	1	319E-02	-2	953E-03	-8	100E-04
1747	1	2	452E-03	2	116E-03	-8	078E-05	6	748E-04	-2	110E-03	-7	027E-04
1748	1	3	488E-03	1	846E-03	1	497E-04	3	148E-03	-2	348E-03	1	084E-03
1749	1	2	134E-03	6	213E-03	2	054E-03	5	647E-03	-1	666E-03	-1	836E-03
1750	1	6	265E-04	1	224E-02	4	395E-03	1	329E-02	-8	045E-04	-8	497E-04
1751	1	2	214E-03	8	532E-03	6	480E-03	1	425E-02	-2	379E-03	-3	489E-03
1752	1	2	592E-03	2	748E-03	-4	529E-05	9	720E-04	-1	515E-03	-1	832E-03
1753	1	1	918E-03	4	444E-03	3	301E-04	6	518E-04	-2	067E-03	1	333E-05
1757	1	5	802E-03	3	300E-03	4	335E-03	8	657E-03	-5	307E-03	-1	859E-03
1758	1	4	341E-03	5	137E-03	7	910E-03	1	270E-02	-5	520E-03	-3	985E-03
1759	1	6	283E-03	2	550E-03	1	051E-02	1	175E-02	4	775E-04	1	151E-03
1760	1	3	332E-03	3	833E-03	5	267E-04	3	869E-03	-2	875E-03	-9	162E-04
1761	1	3	991E-03	3	596E-03	1	923E-03	3	097E-03	-5	699E-03	-2	653E-03
1762	1	2	337E-03	6	250E-03	4	750E-03	8	580E-03	-3	742E-03	-3	847E-03
1763	1	-2	056E-04	8	409E-03	8	328E-03	6	973E-03	-3	600E-03	-4	642E-03
1764	1	2	155E-03	7	472E-03	1	043E-02	1	213E-02	-2	888E-05	7	782E-04
1765	1	2	489E-03	4	340E-03	9	074E-04	3	732E-03	-2	261E-03	-3	413E-03
1766	1	2	324E-03	4	900E-03	2	808E-03	4	294E-03	-4	858E-03	-5	254E-03
1770	1	3	839E-03	3	093E-03	9	554E-03	6	141E-03	-6	171E-03	-4	026E-03
1771	1	4	142E-03	4	920E-03	1	335E-02	1	015E-02	7	783E-03	7	798E-03
1773	1	1	557E-03	5	484E-03	9	654E-03	6	470E-03	-3	824E-03	-4	127E-03
1774	1	3	628E-03	7	411E-03	1	352E-02	3	974E-03	3	386E-03	6	553E-03
1777	1	8	902E-03	5	136E-04	1	342E-03	1	105E-05	-2	451E-03	1	527E-05
1778	1	1	438E-02	-9	130E-04	2	602E-03	5	198E-03	-8	722E-04	-9	896E-05
1779	1	1	320E-02	-1	880E-03	5	642E-03	2	415E-04	-3	900E-03	-7	366E-05
1780	1	2	208E-03	2	248E-03	2	333E-04	6	144E-05	-3	040E-03	-4	659E-04
1781	1	3	779E-03	2	209E-03	1	611E-04	-3	411E-05	-3	985E-03	5	828E-05
1782	1	7	734E-03	1	051E-03	1	513E-03	5	278E-03	-2	433E-03	-7	750E-04
1783	1	1	173E-02	1	291E-03	3	256E-03	1	288E-02	-1	007E-03	-1	459E-04
1784	1	1	162E-02	-3	808E-04	5	798E-03	9	308E-03	-4	065E-03	-5	260E-04
1785	1	2	334E-03	1	568E-03	2	033E-04	9	678E-04	-2	700E-03	-1	073E-03
1786	1	3	801E-03	2	073E-03	1	718E-04	1	240E-03	-3	709E-03	-1	044E-03
1790	1	8	569E-03	2	363E-06	4	451E-03	1	320E-05	-6	161E-03	-1	435E-05
1791	1	1	048E-02	-1	374E-03	8	109E-03	4	089E-03	-7	888E-03	-8	247E-04
1792	1	1	068E-02	-1	729E-03	1	058E-02	2	672E-04	-1	025E-03	-9	847E-07
1793	1	5	386E-03	2	093E-03	1	147E-04	1	124E-03	-4	084E-03	-2	529E-04
1794	1	5	805E-03	2	166E-03	2	023E-03	-1	137E-04	-8	485E-03	-2	019E-06
1795	1	7	781E-03	7	344E-04	4	474E-03	5	313E-03	-6	064E-03	-1	257E-03
1796	1	8	181E-03	1	059E-03	7	898E-03	1	037E-02	-7	250E-03	-1	914E-03
1797	1	9	344E-03	-2	085E-04	1	047E-02	7	263E-03	7	002E-04	6	841E-04
1798	1	4	642E-03	2	211E-03	2	257E-04	2	715E-03	-3	396E-03	-7	588E-04
1799	1	5	630E-03	2	211E-03	2	167E-03	2	556E-03	-8	164E-03	-2	031E-03
1803	1	6	571E-03	3	627E-04	9	581E-03	-9	181E-05	-6	949E-03	3	174E-03
1804	1	9	330E-03	-6	365E-04	1	356E-02	3	281E-03	1	104E-02	1	640E-03

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1806	1	5	693E-03	1	118E-03	9	578E-03	4	091E-03	-6	762E-03	-1	796E-03
1807	1	7	267E-03	1	427E-03	1	363E-02	8	524E-03	7	740E-03	4	576E-03
1810	1	-2	331E-04	1	957E-03	-2	703E-04	1	517E-05	-3	752E-04	-1	065E-06
1813	1	-2	637E-03	1	497E-03	-3	898E-04	-6	935E-04	6	196E-04	2	094E-04
1814	1	-2	769E-03	1	773E-03	-2	940E-04	1	396E-05	1	363E-03	-6	271E-06
1815	1	-3	746E-04	1	720E-03	-1	330E-04	-6	681E-04	-5	465E-04	-3	318E-05
1818	1	-2	153E-03	9	090E-04	-2	521E-04	-2	005E-03	5	789E-04	4	556E-04
1819	1	-2	917E-03	1	407E-03	-1	957E-04	1	720E-03	1	322E-03	6	652E-04
1820	1	-2	425E-04	1	238E-03	-1	931E-04	-1	074E-03	-1	407E-04	1	495E-04
1822	1	-2	151E-03	3	441E-04	2	403E-05	-2	645E-03	8	878E-04	4	813E-04
1823	1	9	744E-04	2	136E-03	-1	553E-04	1	175E-04	-4	897E-04	-1	350E-05
1826	1	-3	117E-03	1	743E-03	2	670E-04	-9	584E-04	1	961E-03	3	550E-04
1827	1	-3	779E-03	2	019E-03	9	001E-04	2	378E-03	1	177E-03	-2	404E-05
1828	1	5	270E-04	1	952E-03	-1	954E-04	-1	519E-04	-1	135E-04	3	517E-04
1831	1	-2	834E-03	8	654E-04	3	385E-04	-2	378E-03	1	450E-03	7	990E-04
1832	1	-4	105E-03	1	598E-03	7	871E-04	-2	372E-03	1	238E-03	6	418E-04
1833	1	-8	087E-03	1	528E-03	1	622E-05	-1	105E-03	6	890E-04	6	212E-04
1835	1	-3	226E-03	2	037E-04	6	822E-04	-3	451E-03	6	666E-04	6	240E-04
1843	1	-1	712E-03	7	953E-04	-1	612E-04	8	665E-06	6	327E-05	1	070E-05
1846	1	-7	755E-04	1	284E-04	-4	270E-04	-1	604E-05	-1	256E-04	-1	173E-06
1847	1	-1	019E-03	1	845E-04	-2	146E-04	-4	174E-05	-3	494E-04	-1	284E-05
1849	1	-5	380E-04	-2	784E-06	-5	794E-04	3	156E-05	1	495E-05	-7	599E-06
1850	1	-5	316E-04	-6	142E-06	-5	624E-04	1	694E-05	-1	391E-05	-3	463E-06
1851	1	-1	558E-03	6	392E-04	-1	400E-04	-6	688E-04	-1	662E-05	1	267E-04
1854	1	-7	420E-04	1	047E-04	-4	366E-04	-6	842E-05	-1	252E-04	-6	785E-06
1855	1	-9	572E-04	1	675E-04	-2	529E-04	-1	277E-04	-3	637E-04	-3	044E-05
1856	1	-9	676E-04	1	526E-04	-2	742E-04	-5	160E-05	-4	947E-04	-5	514E-05
1857	1	-5	298E-04	3	947E-06	-5	876E-04	7	925E-06	3	263E-06	-2	003E-05
1858	1	-5	560E-04	1	139E-05	-5	653E-04	4	769E-05	2	928E-05	-1	909E-05
1859	1	-1	252E-03	2	814E-04	-1	192E-04	-8	162E-04	-1	813E-04	1	289E-04
1861	1	-6	903E-04	7	372E-05	-4	531E-04	-7	746E-05	-1	402E-04	-9	092E-06
1862	1	-9	008E-04	1	756E-04	-3	275E-04	-1	393E-04	-4	322E-04	-5	411E-05
1863	1	-5	232E-04	-2	473E-05	-5	817E-04	4	399E-07	1	731E-05	-4	082E-05
1864	1	-1	958E-03	8	582E-04	3	408E-05	-7	372E-06	4	500E-05	-6	252E-06
1867	1	-8	110E-04	1	303E-04	-4	317E-04	-1	187E-05	-2	222E-04	1	665E-06
1868	1	-9	834E-04	1	613E-04	-2	679E-04	-3	202E-05	-5	870E-04	-2	874E-05
1869	1	-9	834E-04	1	790E-04	-2	910E-04	-1	877E-05	-5	912E-04	1	021E-05
1870	1	-5	522E-04	-8	715E-06	-5	698E-04	3	382E-05	4	184E-06	-1	521E-05
1871	1	-5	365E-04	-1	652E-05	-5	752E-04	1	850E-05	-9	626E-06	-7	797E-06
1872	1	-1	776E-03	6	907E-04	4	087E-05	7	833E-04	-1	326E-04	1	592E-04
1875	1	-7	754E-04	1	035E-04	-4	437E-04	-6	730E-05	-1	945E-04	-1	658E-05
1876	1	-9	092E-04	1	680E-04	-3	215E-04	-8	320E-05	-5	342E-04	-8	360E-05
1877	1	-9	169E-04	1	216E-04	-3	136E-04	-9	262E-06	-5	911E-04	-7	920E-05
1878	1	-5	508E-04	-1	171E-06	-5	727E-04	3	879E-05	3	985E-05	-2	019E-05
1879	1	-5	753E-04	2	007E-05	-5	715E-04	6	231E-05	1	466E-05	-2	742E-05



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1880	1	-1	384E-03	2	777E-04	3	280E-05	-9	435E-04	-3	684E-04	1	796E-04
1882	1	-7	233E-04	4	652E-04	-8	333E-05	-1	994E-04	-3	136E-05		
1883	1	-8	842E-04	2	067E-04	-3	787E-04	-8	466E-05	-4	629E-04	-5	391E-05
1884	1	-5	346E-04	-3	838E-05	-5	840E-04	-1	650E-07	-1	809E-05	-3	373E-05
1898	1	1	447E-02	1	453E-03	3	336E-03	1	086E-06	-6	446E-04	8	848E-05
1900	1	1	176E-03	1	730E-03	1	875E-03	1	772E-04	-1	995E-03	-5	290E-05
1902	1	7	985E-03	1	449E-04	2	565E-03	2	885E-04	-1	770E-03	4	044E-05
1903	1	1	446E-02	-1	424E-03	3	329E-03	-8	099E-05	-6	489E-04	1	282E-05
1904	1	1	302E-02	-2	004E-03	6	022E-03	9	525E-05	-3	048E-03	3	615E-05
1905	1	1	174E-03	1	590E-03	1	875E-03	7	565E-05	-1	860E-03	6	330E-05
1906	1	2	627E-03	1	421E-03	2	144E-03	2	114E-04	-2	354E-03	1	658E-05
1907	1	8	053E-03	1	322E-04	2	579E-03	5	912E-05	-1	809E-03	-1	697E-05
1908	1	1	305E-02	-2	112E-03	6	005E-03	-9	182E-05	-3	093E-03	1	036E-05
1909	1	2	560E-03	1	452E-03	2	125E-03	1	657E-05	-2	202E-03	6	636E-05
1911	1	1	153E-02	-2	441E-03	8	034E-03	3	092E-05	-6	389E-03	9	903E-05
1913	1	4	133E-03	1	159E-03	2	638E-03	3	109E-04	-2	392E-03	-1	560E-04
1915	1	8	420E-03	-3	959E-04	5	510E-03	2	557E-04	-5	154E-03	-7	807E-06
1916	1	1	170E-02	-2	616E-03	8	052E-03	1	642E-04	-6	488E-03	-1	680E-05
1917	1	1	081E-02	-2	522E-03	1	059E-02	-3	612E-04	5	612E-05	-5	605E-05
1918	1	4	028E-03	1	264E-03	2	540E-03	3	089E-05	-2	119E-03	2	245E-05
1919	1	4	768E-03	1	030E-03	4	463E-03	3	939E-04	-5	904E-03	4	933E-05
1920	1	8	570E-03	-6	953E-04	5	493E-03	1	016E-04	-5	114E-03	3	046E-05
1921	1	1	060E-02	-2	704E-03	1	063E-02	-7	146E-05	1	089E-04	2	010E-06
1922	1	4	688E-03	1	176E-03	4	454E-03	-1	194E-04	-5	727E-03	-6	438E-07
1924	1	9	864E-03	-2	516E-03	1	356E-02	-3	896E-04	7	940E-03	-3	830E-04
1926	1	6	652E-03	-1	073E-03	1	049E-02	-5	178E-04	-5	740E-03	-2	155E-05
1927	1	9	455E-03	-2	303E-03	1	369E-02	-5	863E-04	8	000E-03	5	817E-05
1929	1	6	888E-03	-1	091E-03	1	049E-02	1	132E-04	-5	549E-03	-1	758E-05
1934	1	-2	273E-03	-7	039E-04	1	759E-03	2	079E-03	-1	360E-04	4	302E-04
1936	1	1	897E-03	1	496E-04	1	389E-03	1	105E-04	-3	840E-04	-1	420E-03
1938	1	-9	145E-04	4	784E-04	1	871E-03	7	156E-04	3	015E-04	5	957E-05
1941	1	3	934E-04	-1	417E-03	1	465E-03	1	574E-03	-1	038E-03	-6	997E-04
1942	1	-1	671E-03	-1	067E-03	1	859E-03	9	458E-04	-2	803E-04	-5	337E-05
1943	1	-2	425E-03	-7	101E-04	2	182E-03	1	773E-03	-3	600E-05	3	357E-04
1944	1	2	102E-03	-2	053E-03	6	214E-04	3	462E-04	-1	054E-03	-6	296E-04
1945	1	2	394E-03	-8	587E-04	1	059E-03	8	302E-04	-1	467E-03	-5	183E-04
1946	1	-8	598E-04	2	420E-04	1	849E-03	2	382E-05	-2	196E-04	1	356E-06
1948	1	8	873E-04	-2	043E-03	1	110E-03	1	058E-05	-9	184E-04	7	098E-05
1949	1	-1	804E-03	-1	320E-03	2	269E-03	1	424E-04	-4	061E-04	-7	521E-05
1950	1	2	324E-03	-2	686E-03	7	863E-04	1	192E-04	-1	118E-03	1	543E-04
1955	1	-3	402E-03	5	299E-04	2	617E-03	2	466E-03	-2	283E-04	1	312E-03
1957	1	2	237E-03	2	225E-03	1	395E-03	-1	207E-03	-8	171E-04	-1	906E-03
1959	1	-4	975E-04	4	554E-04	2	420E-03	7	560E-04	-1	938E-04	1	437E-04
1962	1	3	881E-04	-6	460E-04	2	004E-03	1	606E-03	-1	536E-03	8	775E-04
1963	1	-2	554E-03	-1	013E-03	2	763E-03	1	067E-03	-3	303E-04	2	696E-04
1964	1	-3	593E-03	-8	694E-04	3	543E-03	2	230E-03	-4	447E-04	5	691E-04

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1965	1	2	575E-03	-1	782E-03	1	529E-03	3	946E-04	-1	503E-03	5	317E-04
1966	1	2	527E-03	-6	926E-04	2	845E-03	1	127E-03	-1	619E-03	1	314E-04
1967	1	-5	512E-04	2	110E-04	2	492E-03	4	631E-03	2	598E-04	-6	434E-05
1969	1	1	071E-03	-2	697E-03	2	293E-03	-6	156E-06	-1	613E-03	1	167E-04
1970	1	-2	832E-03	-1	520E-03	3	291E-03	2	505E-04	-6	064E-04	3	090E-05
1971	1	2	717E-03	-3	715E-03	2	767E-03	3	457E-04	-1	347E-03	3	088E-04
1988	1	1	382E-03	2	780E-03	2	754E-04	1	633E-04	1	667E-03	-3	095E-03
1990	1	2	675E-03	4	361E-04	-3	171E-04	2	565E-03	-4	947E-04	-2	885E-04
1992	1	2	067E-03	-6	505E-04	8	568E-05	1	293E-05	-8	944E-04	-1	481E-03
1995	1	1	577E-03	-6	335E-04	-6	191E-04	9	735E-04	-7	050E-04	-4	561E-04
1996	1	1	667E-03	-1	214E-03	-1	483E-04	3	984E-04	-6	031E-04	-9	773E-05
1997	1	1	979E-03	-7	566E-05	-1	671E-05	1	299E-03	-1	120E-03	1	313E-03
1998	1	9	280E-04	-1	383E-03	-2	913E-05	-4	162E-04	-9	889E-06	2	851E-04
1999	1	1	726E-03	-1	667E-03	1	071E-04	-2	332E-04	4	941E-04	1	581E-03
2000	1	1	736E-03	-2	049E-03	1	894E-04	8	608E-05	-6	178E-04	1	885E-04
2002	1	1	062E-03	-1	702E-03	2	089E-04	-2	596E-04	7	918E-06	2	614E-04
2003	1	1	774E-03	-2	506E-03	5	354E-04	1	724E-04	4	196E-05	3	230E-04
2004	1	4	328E-04	-1	770E-03	5	195E-04	-2	021E-04	3	592E-04	1	795E-04
2009	1	2	727E-03	2	502E-03	7	731E-04	3	491E-03	-1	333E-04	1	533E-03
2011	1	2	128E-03	1	225E-03	7	289E-04	3	962E-04	-3	607E-04	-1	646E-04
2013	1	2	345E-03	-3	083E-04	1	227E-03	1	508E-03	-1	680E-03	2	241E-03
2016	1	2	203E-03	-1	560E-03	1	134E-03	3	036E-04	2	438E-04	3	329E-03
2017	1	2	053E-03	-2	209E-03	1	316E-03	6	326E-04	-2	484E-04	1	218E-03
2018	1	2	545E-03	-2	154E-03	2	783E-03	1	541E-03	1	000E-03	1	232E-03
2019	1	1	017E-03	-2	270E-03	9	734E-04	-6	015E-04	6	639E-04	1	259E-03
2020	1	1	928E-03	-2	658E-03	1	953E-03	-9	604E-04	-5	131E-03	1	664E-03
2021	1	2	120E-03	-3	205E-03	1	544E-03	-1	159E-04	-5	334E-04	1	831E-04
2023	1	1	077E-03	-2	727E-03	1	125E-03	-1	768E-04	2	913E-04	1	903E-04
2024	1	2	149E-03	-3	984E-03	2	014E-03	-2	758E-04	-2	873E-04	2	700E-04
2025	1	3	327E-04	-2	819E-03	1	514E-03	-3	339E-04	3	826E-04	5	311E-04
2042	1	4	404E-04	2	359E-03	-5	391E-04	1	790E-03	-4	707E-04	7	073E-06
2044	1	9	511E-04	1	020E-03	-3	599E-04	1	573E-03	-4	110E-04	3	522E-04
2046	1	1	015E-03	-1	512E-03	-5	566E-04	-1	466E-03	9	448E-06	4	198E-04
2049	1	-4	855E-04	-2	882E-04	-4	899E-04	-1	683E-03	2	676E-04	5	044E-04
2050	1	1	424E-05	-9	003E-04	1	377E-04	-5	512E-04	9	652E-05	2	640E-04
2051	1	2	620E-04	-1	245E-03	-5	034E-05	-2	313E-03	8	424E-04	1	597E-03
2052	1	-9	193E-04	-1	864E-04	1	404E-04	-1	058E-03	1	675E-05	2	811E-04
2053	1	-1	255E-03	-2	589E-04	9	847E-05	-2	359E-03	1	124E-03	9	757E-04
2054	1	-1	097E-05	-1	128E-03	4	267E-04	6	390E-05	1	249E-04	-8	401E-07
2056	1	-5	540E-04	-7	907E-04	5	122E-04	-1	260E-04	-5	553E-05	-2	600E-05
2057	1	-5	887E-04	-9	321E-04	5	121E-04	2	392E-04	7	658E-05	-1	046E-05
2058	1	-7	014E-04	-5	749E-04	4	295E-04	-3	779E-05	-3	887E-04	1	302E-04
2063	1	1	378E-03	1	309E-03	3	012E-04	3	171E-04	-3	444E-04	1	111E-03
2065	1	7	881E-04	1	148E-03	1	604E-04	-7	790E-04	7	773E-04	1	350E-03
2067	1	9	709E-04	-1	489E-03	8	167E-04	-1	883E-03	1	381E-03	3	291E-03
2070	1	-6	865E-04	-8	471E-04	6	926E-04	-2	933E-03	1	716E-03	2	334E-03

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2071	1	-3	137E-04	-1	142E-03	7	534E-04	-1	343E-03	3	453E-04	8	736E-04
2072	1	-1	388E-05	-2	057E-03	1	444E-03	-3	966E-03	5	887E-04	2	203E-03
2073	1	-1	055E-03	-5	159E-04	6	149E-04	-9	555E-04	1	160E-04	6	148E-04
2074	1	-1	819E-03	-7	641E-04	9	698E-04	-3	645E-03	8	783E-04	1	409E-03
2075	1	-1	497E-04	-1	546E-03	8	829E-04	-1	359E-05	9	304E-05	2	143E-04
2077	1	-7	249E-04	-8	307E-04	5	971E-04	2	465E-04	-3	089E-04	1	202E-04
2078	1	-9	163E-04	-1	106E-03	1	032E-03	3	699E-05	-3	957E-05	2	429E-04
2079	1	-5	793E-04	-7	049E-04	6	197E-04	3	559E-04	-5	669E-04	5	451E-05
2095	1	-1	459E-03	9	275E-05	6	811E-05	-1	838E-03	1	354E-04	4	084E-04
2097	1	-7	630E-04	-3	538E-04	4	216E-05	-1	320E-03	9	176E-05	5	341E-04
2100	1	-9	657E-04	-1	434E-04	2	056E-04	4	655E-04	-3	093E-04	1	275E-04
2101	1	-1	034E-03	-9	294E-05	3	018E-04	-1	230E-03	-4	523E-04	3	152E-04
2102	1	-9	102E-04	-3	291E-04	3	446E-04	-1	708E-04	-2	147E-04	4	052E-06
2104	1	-1	100E-03	-2	047E-04	2	790E-04	-1	520E-05	-3	442E-04	-5	075E-05
2108	1	-1	953E-03	1	059E-04	3	860E-04	-2	322E-03	3	090E-04	5	425E-04
2110	1	-1	241E-03	-4	573E-04	5	683E-04	-2	169E-03	4	140E-04	1	164E-03
2113	1	-1	030E-03	-1	894E-04	3	381E-04	-5	692E-04	-5	415E-04	1	261E-04
2114	1	-1	068E-03	-1	235E-04	4	276E-04	-1	402E-03	-6	351E-04	2	464E-04
2115	1	-9	265E-04	-4	220E-04	3	790E-04	7	868E-05	-4	884E-04	1	676E-05
2117	1	-1	350E-03	-2	132E-04	3	938E-04	-8	771E-07	-5	344E-04	-5	127E-05
2129	1	-8	555E-04	-1	195E-04	-3	264E-04	-1	400E-04	-3	547E-04	-3	186E-05
2131	1	-5	122E-04	-2	142E-05	-5	858E-04	-6	498E-07	1	686E-05	-2	049E-05
2133	1	-1	003E-03	8	598E-05	-6	811E-05	-5	094E-04	-3	308E-04	7	331E-05
2136	1	-6	347E-04	2	831E-05	-4	856E-04	-6	740E-05	-1	506E-04	-6	300E-06
2137	1	-7	945E-04	1	018E-04	-3	647E-04	-3	863E-05	-3	570E-04	-1	652E-05
2138	1	-8	055E-04	9	704E-05	-3	669E-04	-7	298E-05	-4	185E-04	-3	630E-05
2139	1	-5	002E-04	-2	157E-05	-5	901E-04	1	660E-05	2	135E-05	-8	454E-06
2140	1	-5	204E-04	-1	504E-05	-5	871E-04	3	047E-05	1	526E-05	-2	754E-05
2141	1	-9	075E-04	-9	884E-06	-8	334E-05	1	922E-05	-3	893E-04	3	620E-06
2143	1	-6	085E-04	1	379E-05	-4	907E-04	-1	582E-05	-1	530E-04	2	533E-07
2144	1	-7	968E-04	9	608E-05	-3	937E-04	-1	228E-05	-4	066E-04	8	939E-06
2145	1	-5	107E-04	-2	259E-05	-5	955E-04	5	785E-06	4	061E-05	-1	055E-05
2150	1	-8	416E-04	1	225E-04	-3	727E-04	-8	496E-05	-4	703E-04	-6	098E-05
2152	1	-5	369E-04	-1	665E-05	-5	850E-04	3	358E-05	6	251E-06	-2	534E-05
2154	1	-1	063E-03	6	852E-05	-3	132E-05	-5	147E-04	-5	140E-04	1	090E-05
2157	1	-6	590E-04	3	492E-05	-4	871E-04	-8	355E-05	-1	853E-04	-5	781E-06
2158	1	-8	087E-04	1	177E-04	-3	904E-04	-1	641E-05	-4	679E-04	-2	986E-05
2159	1	-7	997E-04	1	076E-04	-4	108E-04	-6	322E-05	-5	143E-04	-4	852E-05
2160	1	-5	298E-04	-1	718E-05	-5	986E-04	1	555E-05	-1	494E-05	-1	617E-05
2161	1	-5	384E-04	-1	306E-05	-6	007E-04	4	996E-05	-3	888E-05	-3	195E-05
2162	1	-9	624E-04	6	614E-06	-3	798E-05	-1	860E-05	-5	491E-04	-1	916E-05
2164	1	-6	331E-04	1	399E-05	-4	983E-04	-1	005E-05	-1	896E-04	5	624E-06
2165	1	-7	991E-04	1	013E-04	-4	201E-04	-2	331E-09	-4	835E-04	8	388E-06
2166	1	-5	391E-04	-1	193E-05	-6	027E-04	7	657E-06	1	265E-05	-1	128E-05
2179	1	6	897E-03	7	474E-04	2	186E-03	7	995E-05	5	356E-04	-1	829E-05
2180	1	1	416E-02	-5	422E-04	2	216E-03	8	059E-05	9	112E-04	4	696E-06

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2181	1	1.417E-02	-4.273E-04	2.084E-03	-2.350E-05	8.365E-04	9.169E-06
2182	1	-5.365E-05	1.821E-03	2.148E-03	1.100E-05	1.982E-04	-2.848E-05
2183	1	4.852E-05	1.807E-03	2.089E-03	4.240E-05	1.385E-04	-2.403E-06
2184	1	6.937E-03	7.577E-04	2.189E-03	2.028E-04	5.086E-04	-2.229E-05
2185	1	1.424E-02	-6.388E-04	2.212E-03	4.486E-05	9.226E-04	-1.706E-05
2186	1	1.425E-02	-5.152E-04	2.079E-03	6.974E-05	8.460E-04	-2.046E-05
2187	1	-2.141E-04	1.757E-03	2.165E-03	1.344E-04	1.701E-04	-8.758E-05
2188	1	-7.799E-05	1.863E-03	2.093E-03	-5.033E-05	1.425E-04	-1.327E-05
2189	1	7.035E-03	6.493E-04	2.200E-03	3.595E-04	4.976E-04	-3.092E-05
2190	1	1.424E-02	-6.029E-04	2.084E-03	6.031E-05	8.607E-04	-2.269E-05
2191	1	-2.421E-04	1.859E-03	2.090E-03	5.448E-05	1.003E-04	-6.480E-06
2192	1	6.945E-03	9.883E-04	1.969E-03	-3.870E-05	4.335E-04	-5.555E-07
2193	1	1.418E-02	-3.793E-04	1.964E-03	-4.407E-06	7.146E-04	-9.385E-06
2194	1	1.428E-02	-2.973E-04	1.794E-03	4.519E-05	7.090E-04	1.241E-06
2195	1	-2.248E-05	1.939E-03	1.980E-03	-5.952E-05	1.334E-04	-1.290E-06
2196	1	1.530E-06	2.004E-03	1.916E-03	-4.805E-05	1.450E-04	-1.137E-06
2197	1	6.958E-03	9.316E-04	1.967E-03	2.427E-04	4.334E-04	-3.674E-06
2198	1	1.416E-02	-3.988E-04	1.972E-03	4.396E-05	7.168E-04	8.192E-06
2199	1	1.429E-02	-3.097E-04	1.792E-03	2.848E-05	6.683E-04	1.005E-05
2200	1	-1.498E-04	1.949E-03	1.967E-03	-9.017E-05	1.161E-04	-1.191E-05
2201	1	-8.508E-05	2.010E-03	1.923E-03	-1.045E-04	1.428E-04	-1.841E-05
2202	1	7.053E-03	8.294E-04	1.962E-03	2.352E-04	4.128E-04	3.219E-06
2203	1	1.430E-02	-3.683E-04	1.790E-03	1.366E-04	6.652E-04	5.274E-06
2204	1	-2.740E-04	1.984E-03	1.927E-03	-8.439E-05	1.414E-04	-2.313E-05
2205	1	6.937E-03	1.161E-03	1.633E-03	-2.622E-06	5.967E-04	1.995E-06
2206	1	1.430E-02	-1.443E-04	1.425E-03	5.583E-05	9.186E-04	-5.725E-06
2207	1	1.425E-02	-6.308E-04	2.204E-03	3.293E-05	4.688E-04	-3.608E-06
2208	1	-1.167E-04	2.074E-03	1.807E-03	-8.387E-05	1.557E-04	9.371E-06
2209	1	5.169E-04	1.969E-03	1.905E-03	-4.341E-05	9.465E-04	7.976E-07
2210	1	6.954E-03	1.136E-03	1.631E-03	1.892E-04	5.996E-04	3.937E-06
2211	1	1.433E-02	-1.888E-04	1.418E-03	7.184E-05	9.001E-04	-1.565E-05
2212	1	1.423E-02	-6.271E-04	2.206E-03	-3.738E-05	5.234E-04	-1.211E-05
2213	1	-2.823E-04	2.061E-03	1.823E-03	-1.470E-04	1.559E-04	2.534E-05
2214	1	4.301E-04	1.964E-03	1.904E-03	-5.792E-05	9.331E-04	3.653E-05
2215	1	7.038E-03	1.028E-03	1.645E-03	2.321E-04	6.043E-04	6.278E-06
2216	1	1.421E-02	-6.841E-04	2.210E-03	-1.180E-04	5.164E-04	-1.637E-05
2217	1	2.929E-04	1.931E-03	1.891E-03	-4.305E-05	8.529E-04	7.849E-05
2225	1	-2.232E-03	1.526E-03	2.141E-03	-1.940E-04	3.726E-04	4.247E-05
2228	1	-2.625E-03	1.060E-03	2.082E-03	1.387E-03	9.756E-04	-3.960E-04
2229	1	-4.615E-03	1.030E-03	2.153E-03	1.527E-03	5.760E-04	-2.176E-04
2230	1	-4.921E-03	1.534E-03	2.072E-03	-5.152E-05	4.707E-04	1.875E-05
2231	1	5.561E-04	9.914E-04	1.980E-03	-1.617E-03	4.516E-04	1.765E-04
2232	1	3.572E-04	1.572E-03	1.601E-03	9.096E-04	8.300E-04	-4.911E-04
2233	1	-2.088E-03	1.092E-03	2.154E-03	1.051E-03	2.823E-04	-1.713E-04
2236	1	-1.286E-03	7.309E-04	2.032E-03	6.874E-04	-3.176E-04	2.618E-04
2237	1	-3.366E-03	-2.375E-04	2.139E-03	2.702E-03	2.572E-05	-2.853E-04

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2238	1	-4	156E-03	5	303E-04	2	044E-03	2	817E-03	2	484E-04	-3	086E-04
2239	1	6	303E-04	2	155E-03	1	862E-03	-5	276E-04	-5	230E-05	2	174E-03
2240	1	5	549E-04	1	514E-03	2	256E-03	1	313E-04	-5	485E-04	6	915E-04
2241	1	-1	839E-03	5	093E-04	2	137E-03	1	264E-03	1	133E-04	-1	642E-04
2243	1	-5	865E-04	5	883E-04	1	955E-03	9	960E-04	2	676E-04	1	092E-03
2244	1	-2	852E-03	-6	361E-04	2	103E-03	2	904E-03	-7	155E-05	-9	379E-05
2245	1	1	262E-03	1	003E-03	2	078E-03	1	193E-03	8	918E-04	1	124E-03
2246	1	-2	131E-03	1	383E-03	1	957E-03	1	179E-04	1	970E-04	-5	843E-06
2249	1	-2	369E-03	1	791E-03	1	841E-03	-2	323E-04	1	097E-04	-8	730E-06
2250	1	-4	450E-03	1	089E-03	1	931E-03	1	234E-03	2	237E-04	-6	381E-05
2251	1	-4	594E-03	1	341E-03	1	854E-03	1	148E-04	1	351E-04	8	593E-07
2252	1	-1	176E-05	1	956E-03	1	870E-03	7	557E-04	2	705E-04	-7	214E-05
2253	1	-3	344E-04	2	366E-03	1	805E-03	-2	589E-05	-3	304E-05	2	531E-05
2254	1	-2	072E-03	1	209E-03	1	969E-03	7	454E-04	1	701E-04	-5	891E-05
2257	1	-1	802E-03	9	884E-04	1	968E-03	2	096E-03	2	072E-04	-1	428E-04
2258	1	-3	594E-03	1	026E-04	2	010E-03	2	915E-03	1	418E-04	-1	496E-04
2259	1	-4	123E-03	7	966E-04	1	840E-03	2	343E-03	1	316E-04	-3	546E-05
2260	1	1	094E-03	8	457E-04	1	978E-03	1	485E-03	5	510E-04	2	038E-06
2261	1	4	578E-04	1	553E-03	1	769E-03	1	586E-03	1	084E-04	-6	055E-06
2262	1	-1	947E-03	7	591E-04	2	012E-03	1	244E-03	1	354E-04	-8	854E-05
2264	1	-3	085E-04	-3	124E-04	2	011E-03	2	275E-03	3	132E-04	7	615E-05
2265	1	-2	898E-03	-4	671E-04	1	895E-03	3	244E-03	1	023E-04	-4	914E-05
2266	1	1	864E-03	5	303E-04	1	677E-03	1	382E-03	3	249E-04	1	370E-04
2267	1	-2	087E-03	1	478E-03	1	771E-03	3	411E-05	2	159E-05	-4	106E-06
2270	1	-2	436E-03	1	832E-03	1	659E-03	7	865E-05	1	544E-04	1	994E-05
2271	1	-4	323E-03	1	083E-03	1	773E-03	1	209E-03	8	545E-05	-1	147E-06
2272	1	-4	230E-03	1	338E-03	1	498E-03	7	768E-05	-2	623E-04	1	216E-05
2273	1	8	581E-05	2	085E-03	1	632E-03	8	184E-04	-5	119E-05	6	797E-05
2274	1	5	899E-04	1	972E-03	1	678E-03	7	319E-06	1	275E-03	-3	403E-05
2275	1	-2	025E-03	1	279E-03	1	795E-03	2	022E-03	8	528E-05	1	107E-05
2278	1	-1	684E-03	1	078E-03	1	684E-03	2	829E-05	8	749E-06	8	749E-06
2279	1	-3	453E-03	2	020E-04	1	774E-03	2	854E-03	1	055E-04	-7	711E-05
2280	1	-3	779E-03	8	507E-04	1	506E-03	2	222E-03	-1	163E-04	1	871E-04
2281	1	1	340E-03	9	894E-04	1	579E-03	1	968E-03	-6	166E-05	3	087E-04
2282	1	9	438E-04	1	667E-03	1	801E-03	6	244E-04	8	532E-04	-6	143E-04
2283	1	-1	877E-03	8	857E-04	1	771E-03	1	125E-03	2	368E-05	-1	178E-05
2285	1	-2	136E-04	-4	672E-05	1	623E-03	2	569E-03	1	793E-04	6	145E-05
2286	1	-2	691E-03	-3	656E-04	1	655E-03	2	970E-03	2	935E-05	1	748E-04
2287	1	1	700E-03	1	367E-03	1	590E-03	1	007E-03	-1	295E-04	-1	417E-03
2300	1	2	372E-03	6	291E-03	1	764E-03	-6	409E-03	1	131E-03	2	242E-03
2301	1	7	397E-03	7	861E-03	1	923E-03	-1	302E-02	1	079E-03	4	037E-03
2302	1	3	890E-03	9	948E-03	1	734E-03	1	437E-02	9	165E-04	1	657E-03
2305	1	3	370E-03	3	781E-03	2	099E-03	-7	164E-03	-9	834E-04	4	162E-03
2306	1	1	172E-02	4	666E-03	2	224E-03	-5	796E-03	4	153E-04	7	456E-03
2307	1	1	058E-02	2	047E-03	2	927E-03	-1	419E-02	-4	725E-05	2	714E-03
2310	1	6	430E-03	2	396E-03	2	053E-03	-1	382E-03	1	287E-03	3	595E-03

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2311	1	1	482E-02	-1	358E-03	1	613E-03	1	858E-03	-7	752E-04	-2	622E-03
2313	1	2	797E-03	5	244E-03	1	846E-03	-5	933E-03	4	613E-04	5	636E-04
2314	1	7	558E-03	6	283E-03	1	388E-03	-1	434E-02	-3	781E-04	-2	379E-04
2315	1	4	021E-03	1	046E-02	1	322E-03	-1	433E-02	-2	042E-05	8	187E-04
2318	1	5	735E-03	2	293E-03	1	540E-03	-5	714E-03	3	697E-05	-1	024E-03
2319	1	1	342E-02	1	408E-03	1	289E-03	-7	435E-03	8	501E-04	-8	958E-06
2320	1	1	120E-02	3	273E-03	1	541E-03	-1	340E-02	-7	358E-04	8	184E-04
2323	1	7	263E-03	1	191E-03	1	586E-03	-1	410E-03	-6	196E-04	1	066E-03
2324	1	1	509E-02	-1	267E-03	1	617E-03	-1	144E-03	-3	320E-04	5	477E-04
2326	1	2	989E-03	5	394E-03	1	284E-03	-6	481E-03	-4	830E-04	6	042E-04
2327	1	7	163E-03	7	044E-03	1	080E-03	-1	389E-02	-8	015E-04	5	262E-05
2328	1	4	419E-03	9	012E-03	2	149E-03	-1	293E-02	-4	855E-04	4	691E-04
2331	1	3	616E-03	2	721E-03	1	375E-03	-5	573E-03	-6	248E-04	4	089E-06
2332	1	1	311E-02	1	188E-03	1	235E-03	-6	749E-03	-1	104E-03	-3	615E-04
2333	1	1	120E-02	1	886E-03	2	351E-03	-1	372E-02	-3	546E-04	5	531E-04
2336	1	7	414E-03	6	795E-04	1	564E-03	-6	102E-05	-6	205E-04	-2	945E-04
2337	1	1	445E-02	-2	238E-04	2	155E-03	-1	829E-04	-3	692E-04	-1	641E-04
2346	1	9	447E-04	6	949E-03	1	458E-03	4	239E-03	1	666E-03	9	104E-05
2347	1	-7	191E-04	1	447E-02	1	538E-03	2	009E-03	1	706E-03	9	281E-04
2348	1	-1	397E-04	1	410E-02	1	202E-03	7	647E-03	1	783E-03	5	147E-04
2349	1	2	099E-03	3	439E-04	1	515E-03	-1	481E-03	1	759E-03	1	908E-04
2350	1	2	282E-03	2	624E-04	1	263E-03	6	030E-04	1	400E-03	-2	529E-04
2351	1	7	037E-04	7	683E-03	1	600E-03	-5	208E-04	1	784E-03	1	013E-03
2352	1	1	605E-03	1	307E-02	1	690E-03	-9	565E-03	1	110E-03	1	848E-03
2353	1	-3	607E-04	1	452E-02	1	443E-03	-4	340E-03	1	411E-03	1	132E-03
2354	1	1	351E-03	1	385E-03	1	673E-03	1	669E-03	1	618E-03	1	320E-03
2355	1	2	097E-03	3	807E-04	1	664E-03	1	660E-03	1	550E-03	2	437E-04
2359	1	1	445E-03	6	996E-03	1	003E-03	4	100E-03	1	302E-03	1	894E-04
2360	1	1	176E-04	1	429E-02	1	098E-03	1	925E-03	1	347E-03	4	469E-04
2361	1	4	003E-04	1	422E-02	7	943E-04	7	183E-03	9	177E-04	5	593E-04
2362	1	2	293E-03	2	918E-04	1	288E-04	8	572E-04	1	147E-03	2	139E-04
2363	1	2	414E-03	4	002E-04	9	444E-04	-3	466E-05	6	036E-04	-1	456E-04
2364	1	1	141E-03	7	236E-03	1	390E-03	-1	515E-03	1	171E-03	4	505E-04
2365	1	1	742E-03	1	216E-02	1	541E-03	-9	356E-03	6	788E-04	6	887E-04
2366	1	2	600E-05	1	451E-02	1	159E-03	-4	047E-03	6	174E-04	1	329E-03
2367	1	1	991E-03	4	046E-04	1	682E-03	1	440E-03	9	730E-04	3	254E-04
2368	1	2	477E-03	2	280E-04	1	364E-03	1	514E-03	4	699E-04	-2	091E-04
2372	1	1	747E-03	7	183E-03	5	138E-04	3	043E-03	4	939E-04	7	780E-04
2373	1	5	299E-04	1	459E-02	1	043E-04	1	398E-03	-1	321E-04	5	763E-04
2374	1	2	849E-04	1	360E-02	1	627E-03	7	422E-03	2	984E-04	1	205E-04
2375	1	2	597E-03	2	257E-04	1	069E-03	7	258E-04	4	437E-04	3	909E-04
2376	1	2	872E-03	9	481E-04	8	002E-04	1	738E-03	-8	119E-04	-2	244E-03
2377	1	1	544E-03	7	691E-03	6	860E-04	-1	164E-04	-1	051E-04	5	314E-04
2378	1	2	216E-03	1	315E-02	6	549E-04	-8	852E-03	-8	547E-04	5	855E-04
2379	1	3	209E-04	1	352E-02	1	788E-03	-6	377E-03	-3	756E-04	4	154E-04
2380	1	2	197E-03	5	261E-04	1	290E-03	1	269E-03	2	945E-04	6	932E-04

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2381	1	2	191E-03	1	109E-03	1	235E-03	-1	337E-04	-4	949E-04	-1	759E-03
2392	1	4	625E-03	3	337E-03	1	330E-03	8	142E-03	1	660E-03	-7	108E-04
2393	1	6	273E-03	7	106E-03	1	339E-03	1	668E-02	2	101E-03	-6	896E-04
2394	1	9	029E-03	5	143E-03	8	457E-04	1	590E-02	1	620E-03	-5	586E-04
2395	1	1	070E-03	1	360E-03	1	422E-03	-2	890E-04	1	258E-03	-3	971E-04
2396	1	3	856E-04	1	670E-03	8	539E-04	-1	207E-03	1	334E-03	-4	284E-04
2397	1	2	496E-03	5	443E-03	1	443E-03	7	994E-03	1	632E-03	-2	316E-04
2398	1	1	293E-03	1	218E-02	1	489E-03	1	247E-02	1	979E-03	-2	368E-04
2399	1	3	828E-03	1	024E-02	9	201E-04	1	567E-02	1	975E-03	-8	215E-05
2400	1	1	736E-03	8	545E-04	1	397E-03	3	306E-04	1	465E-03	-2	761E-04
2401	1	1	569E-03	1	528E-03	1	077E-03	-4	101E-04	1	146E-03	-4	005E-04
2405	1	3	415E-03	3	615E-03	2	529E-04	7	053E-03	1	471E-03	-2	690E-04
2406	1	6	731E-03	7	699E-03	4	588E-04	1	511E-02	1	855E-03	-4	951E-04
2407	1	9	620E-03	5	316E-03	-1	514E-03	1	528E-02	1	076E-03	-1	111E-04
2408	1	1	741E-03	1	569E-03	4	156E-04	-1	225E-03	1	187E-03	-5	483E-05
2409	1	5	854E-04	1	900E-03	3	940E-04	-2	344E-03	4	301E-04	-2	397E-04
2410	1	3	107E-03	5	874E-03	6	051E-04	6	873E-03	1	517E-03	-2	788E-04
2411	1	2	056E-03	1	239E-02	7	489E-04	1	129E-02	1	542E-03	-3	193E-05
2412	1	4	539E-03	1	020E-02	3	987E-04	1	463E-02	1	257E-03	-3	203E-04
2413	1	2	143E-03	8	939E-04	8	726E-04	-6	882E-05	1	180E-03	-1	510E-04
2414	1	2	033E-03	1	187E-03	6	111E-04	-6	918E-04	4	742E-04	-3	519E-04
2418	1	5	113E-03	4	322E-03	-8	500E-05	7	449E-04	7	449E-04	-9	450E-05
2419	1	7	287E-03	7	909E-03	-4	555E-04	1	493E-02	8	682E-04	-3	917E-04
2420	1	9	493E-03	4	932E-03	1	148E-03	1	443E-02	2	931E-04	-4	508E-04
2421	1	1	466E-03	1	461E-03	6	080E-04	-1	963E-03	8	426E-05	-7	501E-05
2422	1	1	684E-03	1	374E-03	2	609E-04	1	681E-05	-1	263E-03	-1	743E-03
2423	1	3	488E-03	5	571E-03	2	939E-04	6	542E-03	4	448E-04	-6	012E-04
2424	1	2	828E-03	1	216E-02	-1	673E-04	1	032E-02	6	608E-04	-8	706E-04
2425	1	3	671E-03	1	046E-02	1	316E-03	1	453E-02	-4	151E-05	-5	493E-04
2426	1	2	153E-03	6	859E-04	9	160E-04	-7	533E-04	3	758E-04	-4	971E-04
2427	1	1	617E-03	2	587E-03	4	297E-04	-1	802E-03	-1	026E-03	-2	061E-03
2438	1	1	096E-02	9	080E-04	1	268E-03	9	142E-04	7	818E-04	-1	998E-03
2439	1	1	447E-02	4	405E-04	1	151E-03	4	631E-03	1	175E-03	-3	867E-04
2440	1	1	535E-02	-4	841E-04	7	108E-04	-3	575E-04	9	797E-04	-3	636E-04
2441	1	5	246E-03	2	164E-03	1	321E-03	2	059E-03	1	301E-03	-7	562E-05
2442	1	5	60E-03	1	977E-03	6	205E-04	8	693E-04	1	487E-03	-9	046E-04
2443	1	9	007E-03	1	626E-03	1	109E-03	6	821E-03	1	563E-03	-1	981E-03
2444	1	1	155E-02	2	744E-03	1	108E-03	1	341E-02	1	614E-03	-1	523E-03
2445	1	1	371E-02	1	085E-03	7	387E-04	9	908E-03	1	356E-03	-4	400E-04
2446	1	1	492E-03	2	209E-03	1	281E-03	1	108E-03	6	293E-04	-6	739E-04
2447	1	3	527E-03	2	536E-03	6	643E-04	1	749E-03	1	670E-03	-5	149E-04
2451	1	1	066E-02	1	268E-03	-3	539E-04	4	146E-05	1	337E-03	-4	144E-04
2452	1	1	492E-02	8	981E-04	-2	955E-04	4	643E-03	1	404E-03	-4	655E-04
2453	1	1	560E-02	-9	930E-06	-2	731E-04	-1	314E-04	6	868E-04	-3	621E-05
2454	1	4	023E-03	2	566E-03	-2	628E-04	4	566E-04	1	450E-03	-3	301E-04
2455	1	3	383E-03	2	688E-03	4	810E-05	1	982E-04	6	087E-04	-2	461E-04

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2456	1	8	808E-03	2	289E-03	-1	818E-04	5	343E-03	1	297E-03	-5	580E-04
2457	1	1	175E-02	3	247E-03	7	066E-05	1	264E-02	1	848E-03	-6	632E-04
2458	1	1	383E-02	1	792E-03	-2	357E-04	9	353E-03	8	054E-04	-1	617E-04
2459	1	1	761E-03	2	472E-03	7	203E-05	-6	220E-04	1	407E-03	-3	239E-04
2460	1	2	355E-03	2	657E-03	1	706E-04	7	532E-06	5	782E-04	2	324E-05
2464	1	8	867E-03	1	624E-03	-1	627E-04	1	436E-04	8	950E-04	4	779E-05
2465	1	1	463E-02	1	052E-03	4	236E-04	4	569E-03	1	234E-03	-1	345E-04
2466	1	1	511E-02	-5	812E-04	8	332E-04	1	330E-04	7	455E-04	-1	717E-05
2467	1	1	988E-03	2	726E-03	6	443E-05	-2	822E-04	3	128E-04	-4	314E-05
2468	1	2	014E-03	2	577E-03	2	276E-04	3	495E-05	-1	264E-03	4	224E-05
2469	1	7	710E-03	2	395E-03	1	477E-04	4	302E-03	9	711E-04	-1	332E-04
2470	1	1	169E-02	3	837E-03	-5	349E-04	1	209E-02	1	272E-03	-1	380E-04
2471	1	1	340E-02	9	948E-04	9	351E-04	9	589E-03	8	260E-04	-2	877E-04
2472	1	9	659E-04	2	547E-03	2	175E-04	-1	768E-03	1	870E-04	8	719E-05
2473	1	1	869E-03	2	436E-03	1	819E-04	-3	825E-04	-1	165E-03	-4	218E-04
2484	1	-1	760E-04	1	886E-03	8	652E-04	7	318E-04	2	631E-03	1	116E-03
2487	1	-3	812E-03	1	164E-03	1	337E-04	-6	955E-04	4	130E-03	-3	738E-04
2488	1	-2	822E-03	1	360E-03	-2	974E-04	-1	199E-04	2	681E-03	-3	619E-05
2489	1	-1	361E-03	1	502E-03	1	108E-03	3	541E-05	2	105E-03	-1	387E-03
2492	1	-2	890E-03	1	600E-04	5	295E-04	-1	667E-03	3	999E-03	-5	234E-04
2493	1	-2	547E-03	8	459E-04	-2	624E-04	-1	543E-03	2	594E-03	-9	075E-05
2494	1	-2	151E-03	4	447E-04	1	457E-03	-1	611E-03	2	078E-03	-4	286E-04
2496	1	-1	341E-03	-4	038E-06	-2	063E-04	-1	872E-03	2	403E-03	-1	152E-04
2497	1	1	977E-04	2	031E-03	-5	634E-05	-1	338E-04	8	624E-04	-2	516E-04
2500	1	-2	900E-03	1	234E-03	1	559E-04	-8	821E-04	1	555E-04	2	893E-05
2501	1	-3	087E-03	1	413E-03	-1	891E-04	-7	482E-05	2	598E-04	2	858E-05
2502	1	-2	974E-04	1	776E-03	4	893E-05	-1	088E-03	8	968E-04	-1	497E-04
2505	1	-2	084E-03	5	490E-04	1	233E-04	-1	909E-03	2	120E-04	2	103E-05
2506	1	-2	769E-03	1	066E-03	-6	284E-04	-2	649E-03	2	235E-04	-4	246E-06
2507	1	-7	774E-04	8	612E-04	2	298E-04	-2	497E-03	8	713E-04	-5	807E-05
2509	1	-1	594E-03	2	428E-04	1	456E-05	-1	960E-03	1	857E-04	2	338E-05
2510	1	-8	775E-04	2	144E-03	-8	845E-05	3	695E-05	-7	569E-05	4	072E-05
2513	1	-2	914E-03	1	310E-03	-8	868E-05	-8	010E-04	-1	383E-04	2	854E-06
2514	1	-2	854E-03	1	541E-03	-2	207E-04	-2	714E-05	1	251E-04	-1	127E-05
2515	1	-9	171E-04	1	787E-03	-6	190E-05	-1	410E-03	-1	607E-04	-1	158E-04
2518	1	-2	149E-03	6	552E-04	-5	234E-05	-1	727E-03	-1	726E-04	-1	406E-05
2519	1	-2	719E-03	1	193E-03	1	721E-04	-1	510E-03	1	277E-04	1	584E-04
2520	1	-9	087E-04	9	012E-04	7	865E-05	-2	507E-03	-2	217E-04	1	123E-04
2522	1	-1	725E-03	3	301E-04	-6	909E-05	-2	538E-03	1	032E-04	3	621E-04
2530	1	1	532E-04	5	403E-04	-9	079E-04	-1	514E-05	-3	202E-04	4	524E-06
2533	1	-3	579E-04	6	846E-05	-6	704E-04	1	729E-05	-3	202E-04	4	524E-06
2534	1	-4	803E-04	9	748E-05	-7	418E-04	2	541E-05	-8	588E-04	3	818E-05
2535	1	-4	408E-04	5	746E-05	-6	178E-04	3	788E-06	-7	128E-05	5	115E-06
2536	1	-3	282E-04	1	125E-06	-6	440E-04	3	482E-05	-1	407E-05	-1	082E-05
2537	1	-3	280E-04	2	610E-05	-6	777E-04	1	159E-05	2	577E-05	-1	020E-06
2538	1	1	745E-04	3	244E-04	-8	468E-04	-4	261E-04	1	758E-03	-6	373E-05



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2541	1	-3	525E-04	7	025E-05	-6	677E-04	-4	570E-05	-2	775E-04	5	960E-06
2542	1	-5	012E-04	1	046E-04	-7	173E-04	4	080E-05	-7	302E-04	6	574E-05
2543	1	-4	595E-04	8	491E-05	-6	092E-04	2	835E-05	-7	744E-05	4	196E-05
2544	1	-3	246E-04	6	285E-06	-6	397E-04	4	530E-05	-1	254E-05	-1	264E-05
2545	1	-3	349E-04	1	534E-05	-7	726E-04	3	668E-05	2	274E-05	4	420E-06
2546	1	2	041E-04	1	044E-05	-7	462E-04	5	102E-04	1	431E-03	-6	630E-05
2547	1	-3	460E-04	5	069E-05	-6	542E-04	-5	846E-05	-2	214E-04	4	602E-06
2548	1	-4	901E-04	1	316E-04	-5	826E-04	5	250E-08	-7	622E-05	4	785E-05
2550	1	-3	233E-04	-2	194E-05	-6	652E-04	4	194E-06	1	271E-05	1	065E-05
2551	1	-1	329E-03	5	856E-04	-2	253E-04	1	617E-05	5	192E-04	1	766E-05
2554	1	-4	853E-04	9	481E-05	-5	841E-04	-1	461E-05	2	244E-04	-4	060E-06
2555	1	-3	859E-04	9	429E-05	-5	488E-04	-2	270E-06	5	030E-04	1	089E-05
2556	1	-5	763E-04	1	238E-04	-4	727E-04	1	042E-05	2	688E-04	-6	245E-06
2557	1	-3	645E-04	6	744E-06	-6	308E-04	1	346E-05	7	039E-05	7	805E-06
2558	1	-4	291E-04	1	323E-05	-5	800E-04	9	950E-06	-7	870E-06	6	179E-06
2559	1	-1	206E-03	4	865E-04	-2	379E-04	-5	045E-04	4	903E-04	5	926E-05
2562	1	-4	719E-04	7	458E-05	-5	802E-04	-3	606E-05	2	037E-04	6	211E-06
2563	1	-4	157E-04	1	023E-04	-5	331E-04	-2	680E-05	4	141E-04	3	175E-05
2564	1	-5	823E-04	1	055E-04	-4	662E-04	-1	830E-05	2	343E-04	4	093E-05
2565	1	-3	579E-04	3	184E-06	-6	327E-04	2	105E-06	5	464E-05	1	624E-05
2566	1	-4	344E-04	1	806E-05	-5	871E-04	3	193E-05	-2	178E-06	-4	522E-06
2567	1	-9	438E-04	1	784E-04	-2	473E-04	-6	428E-04	4	153E-04	7	864E-05
2569	1	-4	502E-04	5	211E-05	-5	750E-04	-4	721E-05	1	611E-04	7	405E-06
2570	1	-5	981E-04	1	366E-04	-4	664E-04	-7	439E-05	1	489E-04	3	906E-05
2571	1	-4	063E-04	-2	126E-05	-5	942E-04	4	957E-06	1	392E-06	1	779E-06
2572	1	-1	524E-03	7	058E-04	-1	639E-04	-9	021E-06	9	290E-05	-2	380E-06
2575	1	-6	447E-04	1	134E-04	-4	853E-04	-5	327E-06	5	120E-05	-9	115E-08
2576	1	-8	055E-04	1	506E-04	-3	479E-04	-2	153E-05	2	006E-04	2	309E-05
2577	1	-9	117E-04	1	720E-04	-2	790E-04	-1	703E-05	-4	773E-05	4	799E-06
2578	1	-4	755E-04	1	598E-06	-5	808E-04	2	508E-05	-9	331E-05	-5	153E-06
2579	1	-5	060E-04	4	241E-06	-5	615E-04	1	338E-05	-4	228E-05	-1	990E-06
2580	1	-1	380E-03	5	745E-04	-1	573E-04	-5	847E-04	6	369E-05	4	006E-05
2583	1	-6	214E-04	9	310E-05	-4	897E-04	-5	774E-05	4	007E-05	1	234E-05
2584	1	-7	853E-04	1	423E-04	-3	616E-04	-7	434E-05	1	356E-04	6	199E-05
2585	1	-8	901E-04	1	538E-04	-2	982E-04	-5	125E-05	-8	407E-05	1	065E-05
2586	1	-4	628E-04	1	527E-06	-5	870E-04	3	372E-05	-7	064E-05	-1	255E-05
2587	1	-5	178E-04	1	097E-05	-5	627E-04	4	297E-05	-3	945E-05	-9	458E-06
2588	1	-1	093E-03	2	377E-04	-1	513E-04	-7	289E-04	1	535E-05	-3	240E-07
2590	1	-5	797E-04	6	480E-05	-4	958E-04	-7	454E-05	1	707E-05	2	369E-05
2591	1	-8	379E-04	1	614E-04	-3	346E-04	-1	299E-04	-1	379E-04	1	161E-05
2592	1	-4	862E-04	-2	165E-05	-5	755E-04	-8	911E-06	-3	144E-05	-5	526E-06
2606	1	1	421E-02	-6	800E-04	2	212E-03	5	332E-05	9	367E-04	-1	092E-05
2608	1	-2	454E-04	1	638E-03	2	177E-03	2	275E-04	6	378E-05	-9	438E-05
2610	1	7	062E-03	5	094E-04	2	202E-03	2	210E-04	4	661E-04	-3	345E-05
2611	1	1	423E-02	-7	281E-04	2	214E-03	1	770E-05	9	441E-04	-1	936E-05
2612	1	1	426E-02	-5	957E-04	2	084E-03	6	328E-07	8	569E-04	1	014E-06

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2613	1	-2	036E-04	1	524E-03	2	179E-03	9	622E-05	-1	553E-05	-3	167E-05
2614	1	-2	071E-04	1	673E-03	2	088E-03	1	272E-04	5	906E-05	-4	554E-05
2615	1	7	140E-03	4	595E-04	2	206E-03	4	663E-05	4	706E-04	8	811E-06
2616	1	1	422E-02	-6	520E-04	2	087E-03	-8	466E-05	8	560E-04	-6	491E-06
2617	1	-2	342E-04	1	661E-03	2	084E-03	2	820E-05	3	435E-05	8	104E-06
2619	1	1	421E-02	-4	706E-04	1	974E-03	6	376E-05	7	202E-04	-3	072E-06
2621	1	-2	449E-04	1	862E-03	1	963E-03	3	375E-05	1	014E-04	-9	589E-06
2623	1	7	091E-03	7	319E-04	1	962E-03	2	331E-04	4	204E-04	5	431E-06
2624	1	1	420E-02	-4	783E-04	1	971E-03	-4	874E-05	7	170E-04	-4	088E-07
2625	1	1	439E-02	-4	015E-04	1	792E-03	-2	930E-05	6	794E-04	-1	980E-07
2626	1	-2	754E-04	1	804E-03	1	971E-03	3	400E-05	8	639E-05	-6	883E-06
2627	1	-3	154E-04	1	878E-03	1	929E-03	4	856E-05	1	271E-04	-1	629E-05
2628	1	7	142E-03	7	096E-04	1	964E-03	6	731E-05	4	208E-04	-1	353E-06
2629	1	1	430E-02	-4	705E-04	1	792E-03	-8	070E-05	6	589E-04	7	525E-07
2630	1	-3	634E-04	1	911E-03	1	931E-03	4	433E-05	1	247E-04	-2	472E-06
2632	1	1	437E-02	-2	581E-04	1	410E-03	5	963E-05	9	149E-04	-3	656E-06
2634	1	-4	157E-04	2	044E-03	1	850E-03	-4	261E-05	1	444E-04	2	085E-05
2636	1	7	057E-03	9	386E-04	1	652E-03	2	024E-04	5	845E-04	6	481E-06
2637	1	1	434E-02	-2	637E-04	1	407E-03	-3	063E-05	9	092E-04	-1	304E-05
2638	1	1	428E-02	-6	862E-04	2	205E-03	-5	510E-05	4	747E-04	-6	702E-06
2639	1	-4	712E-04	1	994E-03	1	865E-03	3	025E-07	1	452E-04	2	125E-05
2640	1	2	789E-04	1	776E-03	1	893E-03	7	625E-05	-7	718E-04	5	899E-05
2641	1	7	113E-03	9	182E-04	1	655E-03	6	565E-05	5	907E-04	3	673E-06
2642	1	1	419E-02	-7	831E-04	2	214E-03	-7	516E-05	5	514E-04	1	108E-05
2643	1	2	324E-04	1	849E-03	1	887E-03	1	983E-05	-7	467E-04	-7	879E-06
2650	1	-2	482E-03	-7	891E-04	2	130E-03	1	808E-03	-6	059E-05	5	598E-05
2657	1	1	012E-03	5	580E-05	1	740E-03	1	097E-03	1	317E-03	1	259E-03
2659	1	-1	531E-03	2	684E-04	2	148E-03	7	649E-04	2	794E-05	-4	619E-05
2662	1	-3	470E-04	-1	529E-03	1	930E-03	1	451E-03	7	829E-04	4	437E-04
2663	1	-2	030E-03	-1	034E-03	2	139E-03	6	876E-04	1	533E-04	6	929E-05
2664	1	-2	103E-03	-1	107E-03	2	126E-03	1	681E-03	4	321E-05	9	423E-05
2665	1	1	268E-03	-2	748E-03	1	687E-03	8	143E-04	1	551E-03	2	679E-04
2666	1	1	336E-03	-2	694E-03	1	875E-03	1	727E-03	1	209E-03	3	693E-04
2667	1	-1	448E-03	8	130E-05	2	147E-03	-1	042E-05	2	383E-05	-2	593E-06
2669	1	9	151E-05	-2	289E-03	1	907E-03	2	567E-05	9	858E-04	1	260E-05
2670	1	-1	623E-03	-1	490E-03	2	121E-03	6	330E-05	1	804E-04	2	191E-05
2671	1	1	597E-03	-3	814E-03	1	772E-03	-1	215E-05	1	296E-03	-1	725E-05
2676	1	-2	489E-03	-9	049E-04	2	086E-03	2	623E-03	1	113E-04	-7	825E-05
2678	1	1	676E-03	-1	270E-03	1	870E-03	1	392E-03	7	693E-04	1	786E-04
2680	1	-1	599E-03	3	580E-04	2	033E-03	8	236E-04	9	167E-05	-5	113E-05
2683	1	1	353E-04	-2	397E-03	1	991E-03	1	930E-03	4	870E-04	3	277E-05
2684	1	-1	712E-03	-1	495E-03	2	099E-03	1	028E-03	1	359E-04	-8	773E-06
2685	1	-1	886E-03	-1	149E-03	1	921E-03	1	966E-03	9	473E-05	-4	848E-07
2686	1	1	691E-03	-3	655E-03	1	803E-03	7	644E-04	9	519E-04	1	033E-05
2687	1	1	712E-03	-3	067E-03	1	619E-03	1	731E-03	4	861E-04	2	144E-06
2688	1	-1	466E-03	9	744E-03	2	041E-03	7	029E-06	8	456E-05	-5	574E-06

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2690	1	5	794E-04	-3	045E-03	1	941E-03	-1	048E-06	6	233E-04	-3	604E-06
2691	1	-1	279E-03	-1	677E-03	1	930E-03	7	043E-05	1	385E-04	7	580E-06
2692	1	1	851E-03	-3	909E-03	1	526E-03	-3	790E-03	5	414E-04	-1	084E-05
2697	1	-2	290E-03	-7	521E-04	1	758E-03	2	571E-03	7	900E-05	-6	746E-05
2699	1	1	848E-03	-1	178E-03	1	454E-03	1	618E-03	1	519E-04	1	139E-04
2701	1	-1	533E-03	5	128E-04	1	780E-03	7	648E-04	2	485E-05	-3	125E-06
2704	1	3	427E-04	-2	325E-03	1	625E-03	1	949E-03	1	581E-04	-6	495E-05
2705	1	-1	457E-03	-1	357E-03	1	752E-03	1	025E-03	7	016E-05	-2	984E-05
2706	1	-1	884E-03	-9	288E-04	1	777E-03	1	856E-03	-4	774E-05	4	722E-05
2707	1	1	861E-03	-3	456E-03	1	399E-03	7	795E-04	1	834E-04	-5	239E-05
2708	1	1	951E-03	-2	368E-03	1	153E-03	1	454E-03	-2	748E-04	-5	813E-04
2709	1	-1	387E-03	2	410E-04	1	782E-03	6	322E-07	2	139E-05	3	740E-06
2711	1	7	761E-04	-2	840E-03	1	568E-03	-8	655E-08	1	307E-04	-1	687E-05
2712	1	-1	270E-03	-1	478E-03	1	789E-03	9	434E-05	-1	208E-04	-6	425E-06
2713	1	1	974E-03	-3	202E-03	9	393E-04	-8	291E-05	-4	526E-04	3	357E-07
2730	1	1	784E-03	-1	228E-03	1	572E-03	1	130E-03	1	766E-03	3	451E-04
2732	1	1	260E-03	-1	471E-03	1	474E-03	-4	423E-04	1	443E-03	-2	080E-04
2734	1	1	449E-03	-2	656E-03	1	643E-03	1	080E-03	1	590E-03	2	332E-04
2737	1	1	149E-03	-3	274E-03	1	534E-03	-4	938E-04	1	485E-03	-1	638E-04
2738	1	1	439E-03	-3	288E-03	1	540E-03	4	334E-05	1	538E-03	-4	479E-05
2739	1	1	770E-03	-3	453E-03	1	547E-03	2	183E-04	1	398E-03	-1	596E-05
2740	1	1	857E-04	-2	503E-03	1	476E-03	-6	755E-04	1	460E-03	-9	596E-05
2741	1	7	299E-04	-3	063E-03	1	250E-03	-1	524E-03	1	303E-03	-1	224E-04
2742	1	1	312E-03	-3	452E-03	1	590E-03	-6	352E-05	1	569E-03	-4	195E-05
2744	1	4	448E-04	-2	841E-03	1	482E-03	-8	745E-05	1	502E-03	4	942E-07
2745	1	1	204E-03	-3	457E-03	1	466E-03	-1	600E-04	1	333E-03	1	260E-05
2746	1	-2	807E-05	-2	169E-03	1	153E-03	-6	531E-05	1	255E-03	3	137E-05
2751	1	1	948E-03	-1	599E-03	1	475E-03	5	441E-04	1	092E-03	1	542E-04
2753	1	1	495E-03	-1	451E-03	1	138E-03	-6	066E-04	1	024E-03	-1	841E-04
2755	1	1	774E-03	-3	288E-03	1	655E-03	-7	627E-04	9	652E-04	-7	037E-05
2758	1	1	319E-03	-3	313E-03	1	325E-03	-7	392E-04	9	502E-04	-2	179E-04
2759	1	1	493E-03	-3	435E-03	1	429E-03	-8	010E-05	1	001E-03	-6	589E-05
2760	1	1	912E-03	-3	486E-03	1	275E-03	1	133E-04	5	873E-04	-5	008E-05
2761	1	4	133E-04	-2	360E-03	1	090E-03	-7	608E-04	9	299E-04	-1	474E-04
2762	1	9	009E-04	-2	861E-03	9	104E-04	-1	639E-03	4	627E-04	-2	121E-04
2763	1	1	493E-03	-3	752E-03	1	552E-03	-1	028E-04	9	907E-04	1	256E-05
2765	1	6	363E-04	-2	779E-03	1	174E-03	-1	202E-04	9	534E-04	2	358E-05
2766	1	1	254E-03	-3	145E-03	1	174E-03	-1	240E-04	4	641E-04	-4	821E-05
2767	1	2	030E-04	-1	891E-03	8	069E-04	-5	262E-05	4	120E-04	3	838E-05
2772	1	2	324E-03	-1	764E-03	1	179E-03	6	614E-04	4	208E-04	2	369E-04
2774	1	1	446E-03	-1	207E-03	9	135E-04	-1	367E-03	-1	534E-04	-1	947E-04
2776	1	1	901E-03	-3	331E-03	1	343E-03	9	244E-04	1	334E-04	-1	166E-04
2779	1	1	456E-03	-3	229E-03	1	046E-03	-1	073E-03	-1	886E-04	-4	057E-04
2780	1	1	575E-03	-3	170E-03	1	104E-03	-2	802E-04	-5	513E-05	-1	883E-04
2781	1	1	832E-03	-2	270E-03	7	055E-04	-9	354E-05	-4	713E-04	-1	112E-03
2782	1	5	482E-04	-1	988E-03	7	144E-04	-7	787E-04	-3	677E-04	-2	454E-04

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2783	1	1	196E-03	-2	154E-03	2	574E-04	-1	033E-03	-5	165E-04	-2	677E-04
2784	1	1	562E-03	-3	364E-03	1	156E-03	-1	719E-04	3	862E-05	-4	543E-05
2785	1	7	187E-04	-2	232E-03	7	681E-04	-5	617E-05	-2	458E-04	-5	370E-05
2787	1	1	357E-03	-2	413E-03	4	736E-04	-2	044E-05	-3	636E-04	7	565E-05
2788	1	3	646E-04	-1	471E-03	3	209E-04	-1	816E-04	-1	336E-04	-3	614E-05
2803	1	3	488E-04	-6	684E-04	1	332E-03	-1	265E-03	1	451E-03	-1	716E-04
2807	1	-7	368E-04	-3	287E-04	1	497E-03	-1	907E-03	8	713E-04	-3	173E-04
2809	1	9	227E-03	-2	749E-03	1	403E-03	-2	075E-03	1	499E-03	-1	990E-04
2812	1	-9	104E-04	-1	825E-03	1	377E-03	-2	520E-03	1	350E-03	-1	221E-04
2813	1	-5	780E-04	-1	763E-03	1	250E-03	-9	041E-04	1	599E-03	-4	305E-05
2814	1	-3	256E-04	-2	296E-03	1	128E-03	-2	611E-03	1	150E-03	-1	690E-04
2815	1	-1	170E-03	-1	224E-03	1	413E-03	-9	224E-04	1	080E-03	-3	872E-05
2816	1	-1	223E-03	-1	129E-03	1	011E-03	-2	611E-03	1	475E-03	-1	156E-04
2817	1	-4	147E-04	-1	938E-03	1	321E-03	-1	775E-05	1	654E-03	-2	078E-05
2819	1	-8	272E-04	-1	511E-03	1	295E-03	1	098E-04	1	441E-03	2	863E-05
2820	1	-6	733E-04	-1	473E-03	1	057E-03	1	871E-04	1	269E-03	2	628E-05
2821	1	-6	607E-04	-1	071E-03	8	243E-04	2	608E-05	1	681E-03	4	169E-05
2826	1	7	190E-04	-5	241E-04	7	567E-04	-1	915E-03	1	238E-03	-2	550E-04
2828	1	-1	589E-04	-1	647E-05	3	461E-04	-2	398E-03	1	243E-03	-1	549E-04
2830	1	2	997E-04	-2	640E-03	1	002E-03	-2	223E-03	1	040E-03	-2	991E-04
2833	1	-4	846E-04	-1	553E-03	6	264E-04	-2	744E-03	1	016E-03	-2	618E-04
2834	1	-2	010E-04	-1	488E-03	7	309E-04	-9	969E-04	1	246E-03	-1	746E-04
2835	1	-7	157E-05	-1	906E-03	6	114E-04	-2	655E-03	3	400E-04	-2	124E-04
2836	1	-6	574E-04	-8	252E-04	3	001E-04	-1	038E-03	1	184E-03	-1	082E-04
2837	1	-9	900E-04	-8	326E-04	4	512E-04	-2	547E-03	4	016E-04	-1	870E-04
2838	1	-2	071E-04	-1	709E-03	8	250E-04	7	861E-05	1	157E-03	-1	131E-05
2840	1	-3	068E-04	-1	125E-03	4	047E-04	3	341E-05	1	151E-03	6	162E-05
2841	1	-3	919E-04	-1	109E-03	5	499E-04	1	357E-04	3	124E-04	1	422E-05
2842	1	-5	258E-04	-7	044E-04	3	210E-04	5	721E-05	4	042E-04	1	857E-05
2847	1	9	173E-04	-6	945E-04	6	390E-04	-1	710E-03	-6	568E-05	-2	458E-04
2849	1	-3	047E-04	2	151E-04	2	882E-04	-3	159E-03	-2	907E-04	-2	703E-04
2851	1	3	608E-04	-2	169E-03	7	053E-04	-2	114E-03	4	082E-04	-5	977E-04
2854	1	-4	848E-04	-1	211E-03	4	238E-04	-2	559E-03	-2	846E-04	-5	557E-04
2855	1	-2	081E-04	-1	048E-03	4	356E-04	-1	029E-03	-2	128E-04	-2	453E-04
2856	1	1	085E-04	-1	563E-03	1	407E-04	-2	266E-03	-1	015E-04	-2	360E-06
2857	1	-5	977E-04	-5	587E-04	2	034E-04	-8	205E-04	-2	146E-04	-2	103E-04
2858	1	-9	336E-04	-4	087E-04	3	723E-05	-2	208E-03	-1	716E-04	1	764E-04
2859	1	-6	488E-03	-1	248E-03	4	322E-05	5	709E-05	-1	913E-04	2	645E-05
2861	1	-4	415E-04	-6	962E-04	1	958E-04	1	442E-04	-6	096E-05	-1	606E-05
2862	1	-3	658E-04	-7	933E-04	2	441E-04	2	580E-04	-1	222E-04	-4	082E-05
2863	1	-5	775E-04	-4	515E-04	1	962E-04	-8	105E-05	-1	307E-04	-3	841E-05
2879	1	-1	668E-03	-4	055E-04	6	091E-04	1	214E-03	3	736E-03	-2	550E-04
2881	1	-1	814E-03	-1	050E-03	1	349E-03	-1	430E-03	2	233E-03	-1	031E-04
2884	1	-9	891E-04	-7	022E-04	5	337E-04	-1	957E-04	3	547E-03	-9	440E-05
2885	1	-5	265E-04	-3	108E-04	-2	230E-04	-8	228E-04	2	180E-03	-7	964E-05
2886	1	-1	567E-03	-1	042E-03	1	266E-03	8	811E-05	2	427E-03	2	753E-05

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2888	1	-4	819E-04	-4	591E-04	-2	570E-04	2	282E-05	2	060E-03	-1	822E-05
2892	1	-1	176E-03	5	748E-05	9	778E-05	-1	557E-03	2	454E-04	6	086E-06
2894	1	-6	375E-04	-6	611E-04	2	901E-04	2	789E-03	7	634E-04	-1	516E-04
2897	1	-6	240E-04	-2	496E-04	1	143E-04	-4	400E-04	2	292E-04	4	951E-04
2898	1	-7	921E-04	1	267E-04	4	999E-05	-8	979E-04	1	793E-04	1	733E-05
2899	1	-4	757E-04	-5	685E-04	1	924E-04	3	110E-05	7	345E-04	-1	608E-05
2901	1	-8	016E-04	-2	545E-04	6	738E-05	-3	078E-06	1	615E-04	9	547E-07
2905	1	-1	313E-03	1	602E-04	1	931E-04	-1	464E-03	1	285E-04	-4	584E-06
2907	1	-7	997E-04	-3	985E-04	1	577E-04	-1	710E-03	-2	692E-04	-2	401E-04
2910	1	-8	342E-04	-1	493E-04	4	809E-05	-4	022E-04	-5	252E-05	9	527E-06
2911	1	-9	166E-04	-5	146E-05	9	849E-05	-9	349E-04	-1	208E-04	1	263E-04
2912	1	-6	606E-04	-3	466E-04	6	104E-05	5	959E-05	-9	062E-05	3	883E-05
2914	1	-9	452E-04	-1	922E-04	1	276E-04	2	831E-05	-1	783E-04	1	309E-05
2926	1	-5	058E-04	8	882E-05	-6	709E-04	2	583E-05	-5	878E-04	4	650E-05
2928	1	-3	268E-04	-7	241E-04	-6	377E-04	3	351E-05	-1	434E-05	-3	878E-06
2930	1	2	179E-04	-1	111E-04	-6	960E-04	-3	416E-04	1	169E-03	-9	246E-06
2933	1	-3	316E-04	8	640E-07	-6	339E-04	-4	609E-05	-1	810E-04	-3	350E-06
2934	1	-5	084E-04	9	173E-05	-6	233E-04	2	072E-05	-5	136E-04	1	439E-05
2935	1	-4	731E-04	6	600E-05	-5	591E-04	8	893E-06	-7	674E-05	2	905E-05
2936	1	-3	282E-04	-1	234E-05	-6	432E-04	1	948E-05	-1	439E-05	4	818E-07
2937	1	-3	319E-04	-1	380E-05	-6	567E-04	2	467E-05	2	808E-06	8	726E-06
2938	1	2	204E-04	1	728E-04	-6	985E-04	1	606E-05	-1	074E-03	-1	706E-04
2940	1	-3	249E-04	-1	658E-05	-6	221E-04	-1	220E-05	-1	683E-04	1	437E-06
2941	1	-4	894E-04	6	521E-05	-5	509E-04	-9	566E-06	-7	811E-05	5	485E-06
2942	1	-3	295E-04	-2	172E-05	-6	531E-04	4	196E-06	8	570E-07	-1	400E-06
2947	1	-1	283E-04	6	804E-05	-5	198E-04	-4	346E-05	3	086E-04	3	672E-05
2949	1	-3	513E-04	-1	300E-05	-6	325E-04	-3	730E-06	3	667E-05	1	244E-05
2951	1	-7	353E-04	-7	488E-06	-2	389E-04	-3	900E-04	3	559E-04	3	904E-05
2954	1	-4	239E-04	1	123E-05	-5	718E-04	-4	972E-05	1	219E-04	6	228E-06
2955	1	-4	325E-04	6	388E-05	-5	213E-04	-4	771E-06	2	383E-04	1	690E-05
2956	1	-5	586E-04	7	430E-05	-4	727E-04	-5	982E-05	8	480E-05	2	935E-05
2957	1	-3	502E-04	-2	186E-05	-6	279E-04	6	773E-06	2	412E-05	3	752E-06
2958	1	-3	991E-04	-2	045E-05	-6	005E-04	1	904E-05	-5	880E-06	6	072E-07
2959	1	-6	448E-04	-9	563E-05	-2	196E-04	-4	375E-06	3	122E-04	4	261E-07
2961	1	-4	100E-04	-4	387E-06	-5	737E-04	-1	151E-05	1	133E-04	-8	073E-07
2962	1	-5	561E-04	6	046E-05	-4	690E-04	-4	708E-06	5	113E-05	1	807E-06
2963	1	-3	955E-04	-2	437E-05	-6	054E-04	4	033E-06	-4	839E-06	1	306E-06
2968	1	-7	367E-04	9	830E-05	-3	748E-04	-8	666E-05	4	758E-05	5	052E-05
2970	1	-4	418E-04	-1	402E-05	-5	991E-04	-2	454E-05	-5	631E-05	-1	015E-05
2972	1	-8	606E-04	4	301E-05	-1	544E-04	-4	181E-04	-5	667E-05	3	683E-05
2975	1	-5	370E-04	2	028E-05	-5	015E-04	-6	667E-05	-1	406E-05	8	037E-06
2976	1	-6	999E-04	7	937E-05	-3	838E-04	-2	778E-05	-9	061E-06	1	371E-05
2977	1	-7	502E-04	8	053E-05	-3	642E-04	-8	206E-05	-1	851E-04	5	854E-06
2978	1	-4	722E-04	-2	244E-05	-6	081E-04	1	328E-05	-4	476E-05	-8	164E-07
2979	1	-4	724E-04	-1	617E-05	-5	895E-04	2	764E-05	-1	344E-05	-9	175E-06
2980	1	-7	873E-04	-2	621E-05	-1	483E-04	-1	192E-05	-6	174E-05	-2	471E-06

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2982	1	-5	186E-04	1	523E-06	-5	050E-04	-5	942E-06	-2	733E-05	-4	246E-07
2983	1	-7	397E-04	7	903E-05	-3	815E-04	-1	309E-05	-1	944E-04	-5	347E-06
2984	1	-4	618E-04	-2	597E-05	-5	944E-04	4	772E-06	-1	794E-05	2	014E-06
2997	1	6	437E-03	-9	435E-04	1	018E-02	1	551E-04	2	427E-03	8	002E-06
2998	1	1	103E-02	-2	284E-03	1	112E-02	1	369E-04	9	709E-04	-2	405E-05
2999	1	1	241E-02	-1	669E-03	7	105E-03	-2	245E-04	1	520E-03	2	232E-05
3000	1	1	840E-03	6	097E-04	9	082E-03	2	700E-04	3	551E-03	4	236E-06
3001	1	1	212E-03	4	395E-04	5	239E-03	3	162E-04	3	854E-03	5	139E-06
3002	1	6	483E-03	-8	337E-04	1	017E-02	2	016E-04	2	446E-03	-6	187E-06
3003	1	1	117E-02	-2	453E-03	1	112E-02	9	518E-05	9	896E-04	-4	516E-05
3004	1	1	275E-02	-2	178E-03	7	104E-03	3	242E-04	1	550E-03	2	364E-05
3005	1	1	870E-03	3	929E-04	9	085E-03	9	079E-04	3	544E-03	-4	097E-05
3006	1	9	138E-04	8	542E-04	5	223E-03	2	781E-04	3	857E-03	-7	843E-06
3007	1	6	579E-03	-9	819E-04	1	021E-02	5	517E-04	2	484E-03	5	584E-05
3008	1	1	267E-02	-2	268E-03	7	113E-03	-1	182E-04	1	567E-03	-6	198E-05
3009	1	1	034E-03	7	173E-04	5	167E-03	6	889E-04	3	869E-03	5	117E-05
3010	1	6	874E-03	-6	431E-05	2	625E-03	1	839E-04	1	825E-03	-1	948E-05
3011	1	1	412E-02	-1	401E-03	2	904E-03	9	100E-05	1	123E-03	5	258E-06
3012	1	1	397E-02	-5	374E-04	2	467E-03	-1	725E-04	4	297E-04	3	409E-05
3013	1	2	310E-05	1	259E-03	2	261E-03	7	601E-05	2	574E-03	3	537E-05
3014	1	-4	322E-05	1	412E-03	2	635E-03	2	266E-04	6	168E-04	-4	254E-05
3015	1	6	941E-03	2	608E-05	2	620E-03	1	696E-04	1	825E-03	3	674E-05
3016	1	1	425E-02	-1	526E-03	2	907E-03	-2	667E-05	1	121E-03	1	548E-05
3017	1	1	422E-02	-9	023E-04	2	469E-03	2	719E-04	4	425E-04	-2	562E-06
3018	1	-9	481E-05	1	136E-03	2	213E-03	4	312E-04	2	623E-03	7	496E-05
3019	1	-2	650E-04	1	710E-03	2	628E-03	7	362E-05	6	417E-04	-2	015E-05
3020	1	7	049E-03	-7	842E-05	2	592E-03	4	572E-04	1	846E-03	6	477E-05
3021	1	1	417E-02	-9	990E-04	2	466E-03	-5	086E-05	4	218E-04	-1	140E-05
3022	1	-2	972E-04	1	658E-03	2	618E-03	4	249E-04	6	166E-04	-2	462E-05
3030	1	1	116E-04	1	229E-03	8	858E-03	-4	948E-04	1	643E-03	-1	539E-04
3033	1	-4	106E-04	-6	341E-04	9	610E-03	3	176E-03	-1	873E-03	7	484E-04
3034	1	-1	085E-03	7	969E-04	8	860E-03	1	190E-03	-3	654E-04	2	045E-04
3035	1	-3	443E-03	1	988E-03	4	242E-03	-5	594E-04	2	627E-04	-8	055E-05
3036	1	1	448E-03	-4	525E-04	9	395E-03	-5	310E-03	-2	483E-03	1	923E-03
3037	1	7	676E-04	-2	728E-03	5	574E-03	-2	304E-03	-2	772E-03	5	343E-04
3038	1	5	146E-04	3	298E-04	8	851E-03	1	373E-03	1	486E-03	2	887E-04
3041	1	1	137E-03	5	968E-04	8	572E-03	-2	592E-03	-1	442E-03	1	349E-03
3042	1	-1	630E-04	-2	287E-04	8	685E-03	2	396E-04	-4	980E-04	8	637E-04
3043	1	-1	307E-03	-6	454E-04	4	113E-03	-2	876E-03	5	469E-05	7	135E-04
3044	1	-2	174E-04	4	092E-03	8	454E-03	-3	847E-03	-2	502E-03	2	840E-03
3045	1	9	499E-04	2	554E-03	4	715E-03	-6	475E-03	-2	216E-03	-2	343E-03
3046	1	6	897E-04	-8	964E-05	8	668E-03	6	752E-04	1	215E-03	3	210E-04
3048	1	-3	993E-04	2	508E-03	8	491E-03	1	900E-03	-1	261E-03	2	053E-03
3049	1	-9	035E-04	-2	698E-04	3	733E-03	-1	072E-04	-3	526E-04	1	067E-03
3050	1	-5	761E-04	3	636E-03	4	765E-03	3	360E-04	-1	268E-03	3	269E-03
3051	1	-1	957E-03	1	302E-03	1	647E-03	-5	131E-04	1	861E-03	8	113E-05

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3054	1	-2	662E-03	7	082E-06	1	346E-03	3	191E-03	1	485E-04	-2	683E-04
3055	1	-3	945E-03	6	729E-04	1	009E-03	1	835E-03	8	730E-04	1	736E-04
3056	1	-5	316E-03	2	72E-03	2	319E-03	-3	898E-04	9	460E-04	3	860E-05
3057	1	7	483E-04	-1	408E-04	1	640E-03	-3	733E-03	-6	518E-04	4	956E-04
3058	1	-6	792E-05	-1	101E-03	2	422E-03	-2	403E-03	1	083E-03	-3	172E-04
3059	1	-1	579E-03	5	501E-04	1	509E-03	1	423E-03	1	836E-03	1	598E-04
3062	1	-4	626E-04	2	653E-04	1	259E-03	6	727E-04	-1	796E-04	7	828E-04
3063	1	-2	300E-03	-6	825E-04	6	910E-04	2	021E-03	4	726E-04	4	847E-04
3064	1	-3	524E-03	-1	323E-04	2	270E-03	3	418E-03	6	515E-04	-3	118E-04
3065	1	-2	253E-04	3	303E-03	1	583E-03	1	980E-03	-8	411E-05	1	360E-03
3066	1	7	858E-04	2	541E-03	1	936E-03	-4	402E-03	-2	447E-04	7	483E-04
3067	1	-1	157E-03	1	393E-05	1	271E-03	1	116E-03	1	657E-03	2	859E-04
3069	1	-7	733E-04	1	467E-03	1	020E-03	-2	124E-04	1	844E-06	1	303E-03
3070	1	-2	385E-03	-7	520E-04	2	100E-03	1	698E-03	2	215E-04	3	757E-05
3071	1	2	947E-04	2	874E-03	1	798E-03	8	897E-04	1	189E-03	1	073E-03
3084	1	3	585E-04	6	029E-03	1	003E-02	-5	084E-03	-1	644E-03	2	239E-03
3085	1	4	627E-03	7	939E-03	7	986E-03	-8	754E-03	-2	124E-03	1	064E-03
3086	1	2	730E-03	8	945E-03	6	493E-03	-1	252E-02	-5	626E-04	1	539E-03
3089	1	4	314E-03	5	826E-03	6	290E-03	-7	775E-03	-1	638E-03	1	697E-03
3090	1	6	535E-03	8	733E-03	8	937E-03	-2	293E-03	-1	221E-03	-8	497E-03
3091	1	8	105E-03	7	728E-03	4	017E-03	-8	067E-03	-1	423E-03	-9	167E-04
3094	1	2	971E-03	3	254E-03	1	245E-02	-3	331E-03	-3	252E-03	-7	913E-03
3095	1	7	054E-03	1	165E-02	6	816E-03	3	768E-03	4	212E-05	6	589E-03
3097	1	1	648E-03	7	054E-03	1	638E-03	-5	685E-03	7	171E-04	1	299E-03
3098	1	6	550E-03	8	637E-03	2	853E-03	-1	094E-02	5	832E-04	1	122E-03
3099	1	4	224E-03	1	137E-02	2	001E-03	-1	425E-02	1	241E-03	1	543E-03
3102	1	4	427E-03	5	090E-03	2	734E-03	-7	711E-03	-2	907E-04	1	282E-03
3103	1	9	272E-03	9	178E-03	2	416E-03	-3	721E-03	-2	988E-04	2	948E-04
3104	1	1	013E-02	7	789E-03	1	342E-03	-1	063E-02	7	192E-04	3	394E-03
3107	1	4	930E-03	4	482E-03	1	499E-03	-2	300E-03	-2	906E-04	-5	618E-04
3108	1	1	096E-02	1	028E-02	2	489E-03	1	521E-03	-1	094E-03	-4	494E-03
3117	1	-1	608E-03	6	605E-03	1	048E-02	4	392E-03	1	669E-03	2	277E-03
3118	1	-3	118E-03	1	119E-02	1	144E-02	2	283E-03	4	941E-04	9	059E-04
3119	1	-2	306E-03	1	246E-02	6	729E-03	8	119E-03	2	849E-03	8	753E-04
3120	1	1	042E-04	2	555E-03	9	065E-03	1	138E-03	1	020E-03	3	703E-03
3121	1	6	208E-04	1	595E-03	4	855E-03	1	004E-03	2	999E-03	3	779E-03
3122	1	-1	222E-03	6	744E-03	1	012E-02	-1	126E-03	-2	053E-04	2	817E-03
3123	1	-8	941E-04	9	527E-03	1	123E-02	-7	395E-03	-4	568E-04	5	732E-04
3124	1	-2	623E-03	1	314E-02	6	733E-03	-3	997E-03	3	997E-03	1	896E-03
3125	1	5	214E-05	3	179E-03	8	795E-03	1	584E-03	-8	472E-04	3	817E-03
3126	1	6	621E-04	1	726E-03	4	979E-03	1	584E-03	8	458E-04	3	626E-03
3130	1	4	329E-04	7	085E-03	1	408E-03	4	354E-03	3	273E-03	1	460E-03
3131	1	-1	543E-03	1	455E-02	1	854E-03	2	269E-03	3	111E-03	9	360E-04
3132	1	-7	270E-04	1	407E-02	1	508E-03	8	254E-03	2	124E-03	2	061E-05
3133	1	1	531E-03	6	195E-04	1	342E-03	1	293E-03	2	447E-03	2	133E-03
3134	1	2	017E-03	2	609E-04	1	590E-03	5	266E-04	1	720E-03	3	170E-04

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3135	1	-1	412E-04	7	799E-03	1	827E-03	-6	514E-04	2	171E-03	1	538E-03
3136	1	9	736E-04	1	326E-02	1	836E-03	-9	289E-03	1	807E-03	1	346E-03
3137	1	-1	237E-03	1	532E-02	1	788E-03	-3	721E-03	2	249E-03	8	507E-04
3138	1	5	298E-04	1	974E-03	1	599E-03	1	878E-03	1	033E-03	1	612E-03
3139	1	1	802E-03	8	227E-04	1	772E-03	2	332E-03	1	844E-03	3	979E-04
3150	1	3	015E-03	3	253E-03	8	549E-03	9	605E-03	7	825E-03	3	790E-04
3151	1	2	891E-03	5	508E-03	1	112E-02	1	306E-02	2	176E-03	1	508E-03
3152	1	7	994E-03	4	762E-03	4	573E-03	1	315E-02	2	377E-03	1	773E-04
3153	1	-1	192E-04	3	518E-03	7	972E-03	4	287E-03	8	291E-03	2	854E-03
3154	1	1	576E-03	2	513E-03	2	470E-03	2	338E-03	4	838E-03	2	880E-03
3155	1	-4	512E-04	5	784E-03	1	064E-02	8	534E-03	3	525E-03	1	345E-03
3156	1	-1	344E-03	9	158E-03	1	134E-02	1	117E-02	2	185E-03	-3	452E-04
3157	1	2	294E-03	8	620E-03	6	044E-03	1	559E-02	3	278E-03	-4	658E-04
3158	1	-7	091E-04	3	348E-03	9	711E-03	2	139E-03	2	811E-03	3	446E-03
3159	1	5	038E-04	2	929E-03	4	585E-03	1	730E-03	4	710E-03	3	570E-03
3163	1	4	815E-03	4	157E-03	4	419E-04	7	154E-03	1	271E-03	2	293E-03
3164	1	6	766E-03	7	592E-03	4	472E-04	1	552E-02	1	215E-03	1	103E-03
3165	1	8	611E-03	4	707E-03	1	780E-03	1	648E-02	2	621E-04	7	024E-04
3166	1	1	423E-03	1	994E-03	5	745E-04	8	809E-03	1	495E-03	2	598E-03
3167	1	-1	697E-04	1	600E-03	1	655E-03	-5	747E-04	9	963E-04	7	763E-04
3168	1	2	987E-03	5	934E-03	6	542E-04	8	126E-03	2	563E-03	1	244E-03
3169	1	1	244E-03	1	233E-02	1	246E-03	1	266E-02	2	835E-03	1	362E-04
3170	1	3	448E-03	1	011E-02	1	295E-03	1	641E-02	1	170E-03	-2	021E-04
3171	1	1	774E-03	1	241E-03	7	689E-04	4	139E-04	3	101E-03	2	491E-03
3172	1	1	411E-03	1	659E-03	1	594E-03	4	610E-05	1	157E-03	4	717E-04
3183	1	8	149E-03	5	082E-03	7	384E-03	-2	634E-04	1	625E-03	-1	464E-02
3184	1	9	239E-03	8	643E-03	4	405E-03	-5	570E-03	1	290E-03	1	085E-03
3185	1	8	759E-03	1	697E-03	6	682E-03	4	810E-03	2	944E-03	-9	436E-03
3186	1	8	076E-03	6	933E-03	4	468E-03	1	953E-03	-6	657E-04	2	291E-04
3187	1	9	355E-03	3	182E-02	4	310E-03	9	102E-03	5	978E-03	-4	646E-03
3188	1	4	898E-03	3	800E-03	8	312E-03	1	021E-02	3	515E-03	-4	610E-03
3189	1	1	078E-02	5	123E-03	1	736E-03	5	660E-03	5	465E-04	6	621E-04
3190	1	5	885E-03	2	312E-03	5	876E-03	6	481E-03	6	785E-03	-1	662E-03
3191	1	6	585E-03	4	865E-03	1	664E-03	7	573E-03	3	065E-03	5	728E-04
3193	1	1	242E-02	2	307E-03	1	010E-03	-1	124E-03	3	704E-04	7	334E-03
3196	1	1	230E-02	2	883E-03	1	004E-03	2	417E-03	-5	251E-04	7	645E-03
3197	1	1	504E-02	-2	499E-03	1	516E-03	-1	081E-03	1	023E-03	-3	011E-03
3198	1	7	459E-03	3	477E-03	1	559E-03	3	508E-03	-3	154E-04	6	872E-03
3199	1	8	780E-03	8	705E-04	1	024E-03	5	710E-05	6	640E-04	-3	341E-03
3200	1	8	781E-03	3	696E-03	1	611E-03	7	391E-03	-1	434E-03	6	581E-03
3201	1	1	114E-02	4	277E-03	6	431E-04	1	203E-02	-1	207E-03	4	808E-03
3202	1	1	311E-02	2	551E-04	2	414E-03	1	105E-02	2	811E-04	1	685E-03
3203	1	1	844E-03	3	291E-03	1	357E-03	2	325E-03	9	496E-04	3	481E-03
3204	1	4	382E-03	1	645E-03	2	249E-03	4	967E-03	7	599E-04	1	657E-03
3215	1	3	979E-03	-4	522E-04	7	982E-03	8	809E-05	2	526E-03	-1	936E-03
3218	1	-7	652E-04	-1	057E-03	7	975E-03	1	154E-03	-1	687E-04	1	137E-03



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3219	1	-5	120E-03	-1	481E-03	4	541E-03	7	255E-03	7	738E-04	3	170E-04
3220	1	3	900E-03	4	140E-04	7	325E-03	3	816E-03	4	068E-04	-3	312E-03
3223	1	-1	072E-03	1	812E-04	7	913E-03	-5	182E-04	-1	479E-03	5	040E-04
3224	1	-2	042E-03	-1	801E-04	3	000E-03	-8	029E-04	6	127E-05	1	382E-03
3225	1	1	673E-03	1	107E-03	7	029E-03	1	442E-03	2	334E-03	5	378E-04
3227	1	-2	094E-03	3	026E-04	2	780E-03	-4	750E-04	-9	110E-04	1	254E-03
3228	1	4	029E-04	2	148E-03	1	512E-03	1	417E-03	-1	216E-03	2	724E-03
3231	1	-5	201E-03	-1	416E-05	9	726E-04	9	357E-04	2	194E-04	3	303E-04
3232	1	-6	181E-03	1	443E-03	1	554E-03	-4	160E-04	1	131E-04	-7	147E-04
3233	1	8	758E-03	1	723E-03	1	081E-03	2	234E-03	1	389E-03	3	928E-03
3236	1	-3	018E-03	6	568E-05	-5	922E-05	-1	281E-03	2	435E-05	2	385E-03
3237	1	-5	043E-03	5	944E-04	2	148E-03	-1	796E-03	8	097E-04	3	238E-04
3238	1	-1	304E-03	9	151E-04	3	018E-05	-8	137E-04	8	202E-04	2	565E-03
3240	1	-2	929E-03	-4	143E-04	1	792E-03	-1	339E-03	7	820E-04	1	005E-03
3249	1	1	113E-02	-2	503E-03	1	114E-02	1	328E-04	9	817E-04	-4	693E-05
3251	1	2	115E-03	8	949E-05	9	089E-03	8	313E-04	3	484E-03	-4	999E-05
3253	1	6	681E-03	-1	192E-03	1	023E-02	2	783E-04	2	504E-03	1	977E-05
3254	1	1	122E-02	-2	645E-03	1	114E-02	1	409E-04	9	686E-04	-5	967E-06
3255	1	1	263E-02	-2	198E-03	7	121E-03	2	143E-04	1	527E-03	-2	224E-06
3256	1	2	296E-03	-9	850E-05	9	110E-03	2	857E-04	3	456E-03	-1	680E-05
3257	1	1	281E-03	2	622E-04	5	149E-03	4	435E-04	3	875E-03	1	195E-05
3258	1	6	765E-03	-1	248E-03	1	023E-02	3	362E-05	2	510E-03	2	147E-05
3259	1	1	275E-02	-2	287E-03	7	120E-03	-4	096E-05	1	558E-03	-3	536E-05
3260	1	1	311E-03	1	870E-04	5	128E-03	2	795E-06	3	869E-03	3	733E-05
3262	1	1	416E-02	-1	526E-03	2	908E-03	2	598E-05	1	105E-03	1	542E-05
3264	1	1	916E-05	9	619E-04	2	152E-03	4	495E-04	2	685E-03	4	867E-05
3266	1	7	108E-03	-2	482E-04	2	574E-03	2	131E-04	1	880E-03	3	978E-05
3267	1	1	421E-02	-1	610E-03	2	909E-03	7	639E-05	1	097E-03	4	428E-06
3268	1	1	418E-02	-9	251E-04	2	464E-03	1	484E-04	4	278E-04	5	485E-06
3269	1	1	496E-04	7	989E-04	2	117E-03	1	597E-04	2	720E-03	2	493E-05
3270	1	-1	218E-04	1	229E-03	2	615E-03	3	289E-04	5	729E-04	-4	796E-05
3271	1	7	205E-03	-3	139E-04	2	565E-03	3	403E-05	1	900E-03	1	027E-05
3272	1	1	424E-02	-1	013E-03	2	460E-03	-4	718E-05	4	115E-04	-8	017E-06
3273	1	-1	151E-04	1	168E-03	2	614E-03	3	958E-05	5	551E-04	9	216E-07
3285	1	-5	896E-04	4	204E-04	8	455E-03	-8	666E-04	-4	183E-04	7	394E-04
3287	1	-3	826E-04	2	930E-03	8	508E-03	-1	755E-04	-1	155E-03	2	573E-03
3289	1	6	309E-04	2	239E-05	8	568E-03	2	609E-04	1	387E-03	2	340E-04
3292	1	-5	986E-04	1	435E-03	8	496E-03	-2	197E-04	-5	930E-04	1	233E-03
3293	1	-1	009E-03	7	013E-04	8	330E-03	2	025E-04	-2	494E-04	2	686E-04
3294	1	-1	233E-03	3	191E-04	3	511E-03	-2	030E-04	-1	981E-05	6	987E-04
3295	1	-2	580E-05	1	185E-03	8	507E-03	2	896E-04	-4	108E-04	1	036E-03
3296	1	-1	032E-04	8	418E-04	4	051E-03	9	521E-04	-1	111E-04	2	146E-03
3297	1	5	062E-04	4	374E-05	8	507E-03	2	813E-05	1	334E-03	-1	173E-05
3299	1	-4	556E-04	9	663E-04	8	453E-04	4	954E-05	-3	149E-04	-2	213E-05
3300	1	-1	311E-03	4	977E-04	3	417E-03	1	120E-05	-2	579E-05	1	951E-05
3301	1	2	525E-04	-3	261E-04	3	802E-03	7	592E-05	5	762E-04	6	011E-05

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3306	1	-1.789E-03	-4.338E-04	3.736E-04	6.378E-04	3.214E-04	6.608E-04
3308	1	2.247E-05	1.509E-03	1.200E-03	9.240E-04	5.182E-04	1.457E-03
3310	1	-9.418E-04	1.148E-04	1.104E-03	5.356E-04	1.709E-03	2.218E-04
3313	1	-7.442E-04	-1.278E-04	5.472E-04	8.565E-04	4.353E-04	9.760E-04
3314	1	-1.700E-03	-1.085E-04	1.733E-04	2.062E-04	3.998E-04	2.828E-04
3315	1	-2.093E-03	-6.203E-04	1.985E-03	8.527E-04	3.458E-04	1.562E-04
3316	1	3.297E-04	-1.124E-03	6.824E-04	7.649E-04	1.109E-03	6.358E-04
3317	1	6.649E-04	-1.185E-03	1.839E-03	1.736E-03	1.376E-03	4.116E-04
3318	1	-9.223E-04	1.209E-04	1.004E-03	8.593E-06	1.688E-03	-9.158E-06
3320	1	-4.362E-04	-7.352E-04	3.568E-04	4.384E-05	7.130E-04	7.860E-05
3321	1	-1.831E-03	-6.958E-04	1.924E-03	3.029E-05	4.268E-04	6.062E-06
3322	1	1.058E-03	-2.722E-03	1.778E-03	6.581E-05	1.541E-03	-5.313E-05
3329	1	2.417E-04	1.634E-03	8.833E-03	7.940E-04	3.194E-04	2.484E-03
3341	1	-5.389E-04	1.537E-03	9.065E-03	8.810E-04	1.710E-03	2.251E-03
3343	1	1.958E-04	1.001E-03	8.696E-03	3.532E-04	4.099E-05	1.840E-03
3346	1	-7.812E-05	3.364E-04	8.909E-04	6.788E-04	1.109E-03	1.529E-03
3347	1	2.408E-04	1.222E-04	8.738E-03	2.866E-04	6.263E-04	7.485E-04
3348	1	5.799E-04	-5.810E-04	4.022E-03	4.768E-04	1.693E-03	1.988E-03
3349	1	-9.171E-04	4.487E-05	9.108E-03	9.416E-05	1.854E-03	5.293E-04
3350	1	4.777E-03	-7.136E-04	3.571E-03	4.930E-04	2.941E-03	1.785E-03
3351	1	3.038E-04	1.723E-04	8.604E-03	-1.488E-07	4.745E-04	-1.218E-04
3353	1	-4.681E-04	-2.249E-04	8.940E-03	-5.710E-05	1.292E-03	-9.842E-05
3354	1	3.814E-04	-9.802E-04	3.653E-03	9.787E-05	2.077E-03	2.643E-05
3355	1	-1.341E-04	-4.758E-04	3.012E-03	-2.925E-05	2.901E-03	-3.482E-05
3360	1	1.051E-03	-3.157E-04	1.081E-03	1.074E-03	2.124E-03	1.657E-03
3362	1	1.110E-03	-7.158E-04	2.615E-04	-3.847E-04	3.333E-03	2.017E-03
3364	1	7.154E-04	-1.188E-03	7.402E-04	9.319E-04	1.641E-03	1.279E-03
3367	1	8.752E-04	-2.037E-03	3.938E-05	-4.746E-04	2.917E-03	1.434E-03
3368	1	8.888E-04	-2.090E-03	3.026E-04	2.969E-05	2.688E-03	6.587E-04
3369	1	1.524E-03	-2.814E-03	1.651E-03	4.896E-04	1.832E-03	1.693E-04
3370	1	6.162E-04	-1.364E-03	-9.802E-04	-5.869E-04	3.072E-03	7.493E-04
3371	1	6.182E-04	-2.719E-03	1.267E-03	-1.462E-03	1.676E-03	2.836E-04
3372	1	6.977E-04	-2.078E-03	2.885E-04	-7.197E-05	2.145E-03	5.615E-05
3374	1	6.097E-04	-1.649E-03	-7.063E-04	-7.864E-05	2.968E-03	1.303E-05
3375	1	1.064E-03	-3.087E-03	1.475E-03	-1.394E-04	1.880E-03	-3.253E-05
3376	1	-2.509E-05	-1.897E-03	1.050E-03	-4.684E-05	1.549E-03	-5.659E-05
3393	1	-1.443E-03	2.169E-03	1.005E-02	1.647E-03	3.595E-03	2.014E-03
3395	1	3.408E-03	1.354E-03	6.124E-03	1.632E-03	7.788E-03	1.146E-03
3397	1	-1.051E-03	4.017E-04	9.541E-03	1.540E-04	2.249E-03	1.272E-03
3400	1	-3.830E-04	7.011E-04	7.605E-03	-1.581E-04	6.608E-03	1.183E-03
3401	1	-1.359E-03	1.708E-04	9.757E-03	1.848E-04	3.435E-03	2.352E-04
3402	1	-7.005E-05	-4.062E-04	3.012E-03	-8.520E-04	3.707E-03	1.880E-03
3403	1	3.013E-03	3.527E-04	6.430E-03	-1.661E-04	4.29E-03	5.531E-04
3404	1	8.503E-04	1.762E-04	1.639E-03	-9.005E-04	2.022E-03	1.656E-03
3405	1	-1.192E-03	-1.965E-04	9.351E-03	-4.021E-05	2.669E-03	-3.343E-04
3407	1	4.881E-05	-2.528E-05	7.055E-03	-1.823E-04	5.927E-03	-2.114E-04

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3408	1	1	184E-04	-2	705E-04	2	314E-03	2	992E-05	2	923E-03	-1	119E-04
3409	1	1	144E-03	-4	284E-05	1	518E-03	-5	048E-05	7	589E-04	6	415E-05
3414	1	1	148E-03	5	804E-05	-5	007E-04	-8	226E-04	2	638E-03	2	334E-03
3416	1	-3	982E-04	3	507E-04	1	420E-05	-1	265E-03	6	298E-04	2	382E-03
3418	1	7	009E-04	-1	723E-03	-9	504E-04	-1	729E-03	2	803E-03	1	755E-03
3421	1	-8	480E-05	-1	038E-03	-9	403E-04	-1	915E-03	8	849E-04	1	912E-03
3422	1	5	812E-04	-8	497E-04	-1	634E-03	-7	515E-04	1	604E-03	9	216E-04
3423	1	-2	590E-04	-2	044E-03	1	248E-03	-2	464E-03	1	350E-03	4	855E-04
3424	1	-6	888E-04	-4	418E-04	-7	035E-04	-6	400E-04	-5	362E-05	9	208E-04
3425	1	-1	399E-03	-1	070E-03	1	027E-03	-2	252E-03	1	425E-03	7	623E-04
3426	1	5	761E-04	-8	588E-04	-1	662E-03	4	329E-05	1	916E-03	8	973E-05
3428	1	7	995E-05	-6	289E-04	-1	335E-03	1	376E-04	2	434E-05	5	429E-05
3429	1	-5	887E-04	-1	322E-03	1	057E-03	1	163E-04	1	281E-03	-8	095E-06
3430	1	-8	888E-04	-1	049E-03	7	534E-04	1	911E-05	1	471E-03	-7	123E-06
3446	1	-1	889E-03	5	831E-04	8	130E-03	-1	815E-04	-1	959E-03	2	757E-04
3448	1	9	346E-04	5	746E-04	7	594E-03	-7	817E-05	1	999E-03	6	522E-04
3451	1	-2	009E-03	5	451E-04	8	132E-03	9	971E-06	-1	573E-03	7	456E-05
3452	1	-1	909E-03	3	343E-04	2	993E-03	1	156E-04	-9	037E-04	7	543E-04
3453	1	8	975E-04	3	185E-04	7	694E-03	-1	125E-04	1	808E-03	-3	151E-07
3455	1	-2	051E-03	2	328E-04	3	058E-03	5	188E-05	-4	438E-04	1	880E-05
3459	1	-1	504E-03	5	115E-05	-5	793E-04	-3	784E-04	-3	502E-04	1	794E-03
3461	1	-9	995E-04	3	691E-04	-6	643E-04	-8	410E-04	2	319E-04	1	542E-03
3464	1	-7	814E-04	-2	412E-04	-7	659E-04	2	336E-04	-5	387E-04	6	359E-04
3465	1	-1	454E-03	-5	143E-04	1	429E-03	-1	708E-04	7	764E-04	5	423E-04
3468	1	-7	695E-04	-3	420E-04	-8	601E-04	5	673E-05	-1	038E-04	-2	713E-06
3476	1	-1	348E-03	-6	231E-04	1	337E-03	5	340E-05	7	667E-04	-1	718E-05
3477	1	4	481E-03	2	592E-04	8	170E-03	-3	646E-04	1	406E-03	4	528E-04
3479	1	7	062E-03	-1	982E-05	8	347E-03	4	253E-05	1	462E-03	5	288E-04
3481	1	8	942E-03	-4	359E-04	6	762E-03	3	793E-04	1	992E-03	-5	839E-04
3482	1	1	963E-03	5	120E-04	7	979E-03	-3	731E-04	1	172E-03	1	494E-05
3480	1	1	142E-03	4	829E-04	4	529E-03	2	053E-05	1	338E-03	2	120E-04
3481	1	4	521E-03	3	383E-05	8	265E-03	-1	539E-04	1	196E-03	3	573E-04
3482	1	7	058E-03	-8	451E-04	8	882E-03	-2	543E-06	1	646E-03	5	263E-04
3483	1	9	029E-03	-7	557E-04	6	910E-03	-3	821E-04	1	947E-03	9	417E-04
3484	1	2	112E-03	6	019E-05	7	958E-03	-5	313E-04	6	500E-04	-7	406E-05
3485	1	1	031E-03	-1	363E-05	5	011E-03	2	527E-04	1	638E-03	2	880E-04
3486	1	4	661E-03	-5	308E-04	8	485E-03	-1	685E-04	1	121E-03	-1	356E-04
3487	1	9	152E-03	-7	799E-04	6	716E-03	-1	403E-04	1	876E-03	3	513E-04
3488	1	7	798E-04	1	398E-04	5	016E-03	3	807E-05	2	061E-03	-2	332E-04
3489	1	5	715E-03	-1	623E-06	3	060E-03	8	556E-04	7	679E-04	-8	875E-04
3490	1	1	092E-02	-6	412E-04	5	792E-03	-2	004E-04	9	951E-04	8	649E-04
3491	1	1	071E-02	-1	540E-03	6	562E-03	-2	122E-03	9	414E-04	4	597E-03
3492	1	2	164E-04	-1	167E-04	1	540E-03	-1	338E-04	1	268E-03	4	088E-04
3493	1	-2	400E-04	-7	472E-04	4	764E-03	-1	338E-04	8	110E-04	5	762E-04
3494	1	5	468E-03	-8	144E-04	4	081E-03	-3	160E-04	1	502E-03	1	469E-03
3495	1	1	118E-02	-1	088E-03	5	813E-03	-7	867E-04	4	758E-04	9	180E-04

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3496	1	9	512E-03	-1	438E-03	8	522E-03	3	071E-03	9	254E-04	-3	583E-03
3497	1	-2	565E-04	9	447E-05	1	881E-03	6	465E-04	2	163E-03	-2	774E-04
3498	1	-3	835E-05	-1	934E-04	5	367E-03	-3	618E-04	4	198E-04	4	193E-04
3499	1	5	429E-03	-2	217E-04	3	828E-03	-1	046E-04	1	135E-03	-7	088E-05
3500	1	8	537E-03	7	010E-05	7	008E-03	9	526E-04	3	487E-03	-5	900E-05
3501	1	-8	138E-04	4	547E-04	5	288E-03	-1	147E-04	4	832E-04	-1	249E-04
3510	1	7	066E-03	-9	856E-04	8	963E-03	-8	509E-05	1	744E-03	2	215E-05
3512	1	2	303E-03	-9	614E-05	8	009E-03	-2	216E-04	5	228E-04	-3	523E-05
3514	1	4	721E-03	-6	178E-04	8	460E-03	-1	108E-04	1	161E-03	6	428E-05
3515	1	7	046E-03	-1	064E-03	8	969E-03	-4	402E-05	1	692E-03	6	160E-05
3516	1	9	218E-03	-8	470E-04	6	739E-03	-5	816E-05	1	658E-03	1	587E-04
3517	1	2	410E-03	-1	445E-04	7	968E-03	-3	395E-05	6	340E-04	-1	953E-05
3518	1	7	615E-04	1	172E-04	5	017E-03	-6	110E-05	2	054E-03	-8	456E-05
3519	1	4	734E-03	-6	126E-04	8	484E-03	-1	809E-05	1	162E-03	3	498E-07
3520	1	9	190E-03	-8	733E-04	6	775E-03	1	981E-05	1	689E-03	1	679E-05
3521	1	8	167E-04	5	829E-05	5	015E-03	3	294E-06	1	947E-03	9	283E-06
3523	1	1	148E-02	-8	087E-04	5	843E-03	-2	361E-04	-3	971E-04	3	040E-04
3525	1	-5	952E-04	3	878E-04	1	633E-03	1	458E-04	2	562E-03	-2	989E-04
3527	1	5	450E-03	-1	261E-04	3	633E-03	-2	688E-05	1	016E-03	3	500E-05
3528	1	1	156E-02	-6	934E-04	5	697E-03	-1	960E-05	-4	050E-04	1	339E-04
3529	1	8	150E-03	-1	834E-04	7	594E-03	-1	792E-04	3	321E-03	6	482E-04
3530	1	-6	323E-04	3	305E-04	1	642E-03	-4	130E-05	2	343E-03	-4	810E-05
3531	1	-9	024E-04	4	884E-04	5	064E-03	-7	240E-05	-3	507E-04	-3	130E-05
3532	1	5	473E-03	-2	093E-04	3	697E-03	3	544E-05	9	324E-04	2	738E-05
3533	1	8	154E-03	-4	207E-04	7	954E-03	-1	332E-04	2	973E-03	2	288E-05
3534	1	-8	434E-04	4	027E-04	4	983E-03	-2	138E-07	-3	544E-04	-1	313E-06

## NODE POINT OUTPUT SET ALL

## TOTAL DISPLACEMENTS

NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT	NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
1	1.1017E-04	-3.7342E-25	1.3118E-03	2	2.5991E-04	-4.6836E-25	1.1886E-03
3	2.9975E-04	-1.3471E-24	1.1098E-03	4	9.7759E-05	-1.6588E-05	1.3272E-03
5	2.1794E-04	2.0587E-04	1.2710E-03	6	2.5502E-04	-6.0517E-05	1.2471E-03
7	1.2932E-04	1.3492E-04	1.2941E-03	8	4.5648E-05	8.4454E-05	1.2422E-03
9	2.9661E-04	1.6290E-04	1.1082E-03	10	-3.5163E-25	-3.9837E-03	2.9837E-03
11	6.6646E-05	6.1807E-25	2.9147E-03	12	1.2961E-03	-1.8010E-24	2.6857E-03

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13	-3	9695E-04	-3	0619E-04	2	9815E-03	14	4	0337E-04	-1	1821E-04	2	8850E-03
15	6	4139E-04	-6	5864E-04	2	6054E-03	16	-4	4582E-04	6	5603E-05	2	9653E-03
17	2	3324E-04	-1	1338E-04	2	8415E-03	18	7	9434E-04	3	3567E-04	2	3262E-03
19	-3	6753E-04	-7	0693E-25	5	6657E-03	20	7	1719E-04	-7	6290E-25	5	1662E-03
21	1	8550E-03	-1	4591E-24	5	2226E-03	22	-3	8833E-04	-1	5511E-04	5	6700E-03
23	7	9283E-04	3	0995E-04	4	9020E-03	24	1	7368E-03	-2	5692E-04	5	0071E-03
25	-2	8267E-04	1	4371E-05	5	7376E-03	26	8	3454E-04	1	8143E-04	4	7235E-03
27	1	6718E-03	-2	1297E-04	4	7438E-03	28	1	4364E-03	-1	1981E-26	-8	2950E-05
29	4	1722E-04	6	0139E-26	-3	9243E-04	30	-1	4696E-25	2	6214E-26	-5	4592E-04
31	1	2846E-03	3	9922E-04	-6	4653E-05	32	3	9325E-04	8	8167E-05	-4	0342E-04
33	0	0000E+00	9	4316E-06	-5	5188E-04	34	9	9540E-04	4	9383E-04	-3	7778E-06
35	3	5633E-04	1	2636E-04	-4	0548E-04	36	0	0000E+00	4	0811E-06	-5	5907E-04
37	1	1060E-03	1	4116E-24	3	4015E-04	38	4	2508E-04	4	8193E-25	-5	4979E-04
39	2	8432E-25	-7	5143E-25	-7	6923E-04	40	1	0689E-03	2	8858E-04	3	3128E-04
41	4	1398E-04	7	4847E-05	-5	4789E-04	42	1	3235E-23	4	5921E-06	-7	7165E-04
43	9	3357E-04	3	8628E-04	2	9687E-04	44	4	0188E-04	1	1973E-04	-5	6324E-04
45	-9	9262E-24	8	7316E-07	-7	7790E-04	46	1	1064E-03	3	4367E-26	1	9068E-03
47	6	3630E-04	1	1553E-25	6	1059E-04	48	6	1417E-26	-2	1486E-25	3	7705E-04
49	1	2130E-03	2	1598E-04	1	8201E-03	50	6	3342E-04	8	6091E-05	6	0702E-04
51	0	0000E+00	5	5405E-06	3	7117E-04	52	1	3613E-03	4	5547E-04	1	6284E-03
53	6	3049E-04	1	7022E-04	5	8072E-04	54	-2	6470E-23	6	8225E-06	3	6447E-04
55	1	1258E-04	1	2180E-04	1	2917E-03	59	3	2251E-05	2	0278E-04	1	2433E-03
60	2	3006E-04	4	0844E-04	8	8724E-04	61	2	0479E-04	1	6941E-21	1	2819E-03
62	9	6228E-05	0	0000E+00	1	2323E-03	63	5	3949E-04	0	0000E+00	7	9611E-04
67	-3	3767E-04	-1	6958E-06	2	9481E-03	68	1	5716E-04	0	0000E+00	2	8406E-03
69	4	9767E-04	1	8838E-04	2	2384E-03	70	-2	3723E-04	0	0000E+00	2	9501E-03
71	1	7763E-04	1	6941E-21	4	3905E-03	72	6	4110E-04	3	7774E-21	2	1488E-03
76	-2	2510E-04	-4	8873E-05	5	7086E-03	77	7	6002E-04	7	7774E-21	4	6205E-03
78	1	2666E-03	2	4165E-04	4	4799E-03	79	-1	7899E-04	1	6941E-21	5	7226E-03
80	8	5758E-04	0	0000E+00	8	9691E-04	81	1	3026E-03	0	0000E+00	4	1559E-03
83	4	9766E-04	3	9353E-04	6	4210E-04	84	7	8221E-04	6	3163E-04	5	9988E-04
86	5	4004E-04	5	9460E-04	5	5967E-04	87	7	8818E-04	7	8794E-04	4	2109E-04
89	8	9647E-04	0	0000E+00	1	9842E-03	90	1	0772E-03	0	0000E+00	4	0821E-04
92	8	3841E-04	-1	1916E-04	1	8344E-03	93	8	4165E-04	-2	9343E-05	1	4255E-03
95	7	1642E-04	3	7526E-04	1	7385E-03	96	8	5341E-04	6	1458E-04	1	4290E-03
98	9	5695E-04	0	0000E+00	1	7385E-03	99	1	1393E-03	0	0000E+00	1	3141E-03
101	1	5331E-03	-1	2514E-04	4	4853E-03	102	1	4124E-03	-1	6473E-04	4	0274E-03
104	1	4040E-03	3	7130E-04	3	9135E-03	105	1	4693E-03	5	8227E-04	3	3042E-03
107	1	5731E-03	1	3553E-20	3	6143E-03	108	1	7775E-03	0	0000E+00	2	8776E-03
110	9	2260E-04	5	6876E-04	4	2951E-04	111	1	0078E-03	4	5157E-04	2	4317E-04
113	9	0308E-04	8	3381E-04	2	7647E-04	114	9	7596E-04	7	6802E-04	1	4862E-04
116	1	0416E-03	0	0000E+00	2	6332E-04	117	9	4244E-04	0	0000E+00	1	1145E-04
119	6	3775E-04	-3	7264E-05	9	0420E-04	120	4	4171E-04	-3	5647E-05	5	6976E-04
122	9	1484E-04	7	0817E-04	1	0486E-03	123	9	8430E-04	6	7614E-04	7	6156E-04
125	1	0695E-03	0	0000E+00	8	2453E-04	126	9	6699E-04	0	0000E+00	3	8581E-04
128	1	0492E-03	-2	3946E-04	3	5049E-03	129	6	7427E-04	-2	1822E-04	3	1790E-03

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131	1 4807E-03	6 9206E-04	2 6901E-03	132	1 4821E-03	7 1713E-04	2 2350E-03
134	1 7498E-03	1 3553E-20	2 1430E-03	135	3 0833E-04	1 3553E-20	1 5783E-03
139	7 8307E-04	5 2881E-04	2 7020E-05	140	3 0833E-04	1 6017E-04	4 1212E-04
141	0 0000E+00	1 1200E-05	-5 6299E-04	142	8 4098E-04	6 7763E-21	4 4919E-05
143	3 3231E-04	0 0000E+00	-4 1549E-04	144	-1 4236E-25	-6 0286E-26	-5 6560E-04
148	8 1053E-04	4 6998E-04	2 4573E-04	149	3 7503E-04	1 7327E-04	-5 8018E-04
150	-5 2940E-23	6 4743E-06	-7 8662E-04	151	8 7099E-04	-6 7763E-21	2 0877E-04
152	4 1086E-04	0 0000E+00	-5 8662E-04	153	2 8007E-25	7 0550E-25	-7 9018E-04
157	1 3120E-03	6 4501E-04	1 4596E-03	158	6 0897E-04	2 6267E-04	5 6126E-04
159	-5 2940E-23	7 5830E-06	3 5958E-04	160	1 4414E-03	1 3553E-20	1 3773E-03
161	6 6799E-04	0 0000E+00	5 5113E-04	162	4 8513E-26	1 9587E-25	3 5594E-04
163	4 3106E-04	2 9269E-25	7 6110E-04	164	2 2283E-04	1 3901E-25	6 6162E-04
165	5 4704E-05	4 6147E-25	6 7853E-04	166	4 3353E-04	7 8724E-05	7 6023E-04
167	1 9902E-04	1 2721E-04	6 5852E-04	168	3 7690E-05	1 6046E-04	7 0250E-04
169	4 4118E-04	1 4174E-04	7 5812E-04	170	1 2577E-04	1 5940E-04	6 8394E-04
171	1 4019E-04	2 2696E-04	6 2469E-04	172	3 1139E-04	1 0143E-25	1 0127E-03
173	2 2858E-04	7 5291E-26	8 8618E-04	174	1 1632E-04	8 2894E-29	8 7990E-04
175	3 0224E-04	2 4222E-06	1 0152E-03	176	1 7566E-04	-2 3034E-05	9 1950E-04
177	1 5854E-04	6 4227E-06	9 9334E-04	178	3 0647E-04	1 3803E-04	1 0020E-03
179	8 2551E-05	5 3734E-05	9 0636E-04	180	1 8587E-04	1 3438E-04	8 7207E-04
190	1 2354E-25	8 0845E-26	-4 4643E-04	191	3 8534E-04	1 2544E-25	-3 4220E-04
192	-1 4312E-25	8 0845E-26	-4 4643E-04	193	1 123E-03	3 2743E-04	-1 2340E-04
194	3 6127E-04	7 6900E-05	-3 4639E-04	195	0 0000E+00	1 0584E-05	-4 4986E-04
196	8 9104E-04	4 5386E-04	-7 9783E-05	197	3 2530E-04	1 0948E-04	-3 4443E-04
198	0 0000E+00	1 0058E-05	-4 5258E-04	199	1 3686E-03	4 3334E-26	-1 4229E-04
200	4 0363E-04	5 0040E-26	-3 7403E-04	201	-7 1331E-26	2 7790E-26	-5 0112E-04
202	1 2294E-03	3 6818E-04	-1 0866E-04	203	3 7965E-04	8 1123E-05	-3 6950E-04
204	0 0000E+00	9 0613E-06	-4 9536E-04	205	9 6508E-04	4 9986E-04	-5 8036E-05
206	3 3923E-04	1 2466E-04	-3 6851E-04	207	-5 2940E-23	1 1504E-05	-5 0160E-04
220	4 2901E-04	1 9478E-04	7 6193E-04	221	1 5732E-04	1 8481E-04	7 1611E-04
222	2 1179E-04	3 7048E-04	5 1527E-04	223	4 8854E-04	-3 3881E-21	7 5298E-04
224	2 1610E-04	1 6941E-21	7 1442E-04	225	4 8633E-04	0 0000E+00	4 5759E-04
229	3 2374E-04	1 2980E-04	9 9453E-04	230	1 6004E-04	1 5886E-04	9 1792E-04
231	2 2059E-04	3 4411E-04	6 2719E-04	232	3 6856E-04	0 0000E+00	9 9461E-04
233	1 8769E-04	0 0000E+00	9 3859E-04	234	5 1789E-04	3 3881E-21	5 3669E-04
245	9 0421E-05	5 1883E-04	5 1883E-04	246	6 3639E-04	3 5785E-04	3 5830E-04
248	4 9533E-04	4 2532E-04	3 6768E-04	249	6 7404E-04	6 1735E-04	2 2517E-04
251	7 4963E-04	6 7763E-21	3 1742E-04	252	8 9840E-04	0 0000E+00	2 1180E-04
254	3 9994E-04	4 5901E-05	6 9663E-04	255	6 9996E-04	4 6238E-04	5 1156E-04
257	4 8974E-04	5 3574E-04	4 1639E-04	258	7 3554E-04	7 5740E-04	2 7101E-04
260	8 1882E-04	0 0000E+00	3 6348E-04	261	9 9365E-04	0 0000E+00	2 6032E-04
272	8 8986E-04	2 7863E-04	2 3179E-04	273	1 1087E-03	2 4409E-04	1 2785E-04
275	8 2072E-04	6 5609E-04	1 2843E-04	276	6 3545E-04	6 0741E-04	4 8491E-05
278	9 1820E-04	0 0000E+00	1 1863E-04	279	6 1122E-04	0 0000E+00	2 3288E-05
281	8 5646E-04	4 6666E-04	3 6409E-04	282	1 0480E-03	3 9755E-04	2 1632E-04
284	8 8019E-04	7 8769E-04	1 7962E-04	285	9 2767E-04	7 0918E-04	7 8902E-05

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287	9	7882E-04	-6	7763E-21	1	6665E-04	288	8	8082E-04	6	7763E-21	6	5875E-05
301	7	0755E-04	4	5072E-04	-3	8175E-05	302	2	8259E-04	1	4485E-04	-3	4301E-04
303	0	0000E+00	9	5902E-06	-4	5343E-04	304	7	6680E-04	0	0000E+00	-2	4024E-05
305	3	0338E-04	3	3881E-21	3	4455E-04	306	-1	3762E-25	-1	1002E-25	-4	5640E-04
310	7	4215E-04	4	8694E-04	-2	7220E-05	311	2	9303E-04	1	5132E-04	-3	7866E-04
312	0	0000E+00	8	8188E-06	-5	1044E-04	313	8	0391E-04	0	0000E+00	5	6670E-06
314	3	1691E-04	3	3881E-21	-3	7398E-04	315	-6	4755E-26	-4	2833E-26	-5	0616E-04
325	1	3826E-04	-2	7579E-25	-3	4026E-03	326	2	9569E-05	-6	8738E-26	-3	0083E-03
327	-2	5421E-04	-6	1471E-25	-3	3372E-03	328	1	4408E-04	3	0798E-05	-3	4000E-03
329	1	0341E-04	9	5264E-05	-2	9518E-03	330	2	9655E-04	-3	0427E-04	-3	0070E-03
331	1	6149E-04	8	5613E-05	-3	3928E-03	332	1	5504E-04	1	2063E-04	-2	8198E-03
333	1	2235E-04	-1	8807E-04	-2	9262E-03	334	3	3388E-04	4	9451E-25	-1	6277E-03
335	-2	5323E-05	7	2707E-25	-1	5303E-03	336	-6	1715E-04	-3	1897E-25	-1	4506E-03
337	3	3860E-04	5	3199E-05	1	6274E-03	338	-1	8114E-06	6	8992E-05	-1	5113E-03
339	-8	4098E-05	-2	1243E-04	-1	4404E-03	340	3	4820E-04	1	2936E-04	-1	6265E-03
341	-1	2698E-05	1	1279E-04	-1	4716E-03	342	-1	4938E-04	-6	7122E-05	-1	3362E-03
343	4	9109E-04	2	5596E-25	-7	4557E-04	344	1	2294E-04	1	9018E-25	-7	4168E-04
345	-3	7510E-04	1	0505E-25	-6	4143E-04	346	4	9203E-04	7	3168E-05	-7	5039E-04
347	9	5744E-05	9	6734E-05	-7	4657E-04	348	-1	2645E-04	1	5922E-05	-7	6945E-04
349	4	9271E-04	1	5916E-04	-7	4855E-04	350	3	0815E-05	1	5538E-04	-7	5174E-04
351	-1	0752E-04	1	8408E-04	-7	0908E-04	352	1	8540E-05	4	0990E-05	-3	3844E-03
353	1	7692E-04	9	8438E-05	-2	7022E-03	354	6	0406E-05	7	5169E-06	-2	674E-03
356	2	1726E-04	0	0000E+00	-3	3841E-03	358	1	8534E-04	0	0000E+00	-2	6512E-03
360	8	9070E-05	8	4703E-22	-2	5390E-03	362	3	5263E-04	1	5589E-04	-1	6249E-03
363	4	1531E-05	6	7673E-05	-1	4437E-03	366	-1	5045E-04	6	2999E-05	-1	2918E-03
367	3	9610E-04	3	3881E-21	-1	6245E-03	368	5	4654E-05	0	0000E+00	-1	4212E-03
369	-5	2027E-05	0	0000E+00	-1	2279E-03	372	4	8134E-04	2	1194E-04	-7	5026E-04
374	7	6723E-05	1	3152E-04	-7	6456E-04	376	-5	6271E-05	2	4118E-04	-6	6137E-04
376	5	3721E-04	3	3881E-21	-7	4776E-04	380	1	1669E-04	-8	4703E-22	-7	6507E-04
378	1	4497E-04	0	0000E+00	-6	1937E-04	384	1	0509E-04	1	2929E-05	-2	8069E-03
381	1	4168E-04	3	1184E-05	-2	5198E-03	388	1	1891E-04	1	3706E-04	-2	4538E-03
384	1	3759E-04	1	4035E-01	-2	0389E-03	392	2	0409E-04	0	0000E+00	-2	2404E-03
387	1	4132E-04	1	6941E-2	-1	7621E-03	396	-1	1657E-04	1	8421E-04	-1	1606E-03
390	3	0341E-05	3	6520E-04	-9	3090E-04	400	-4	9847E-05	2	0287E-04	-1	0944E-03
393	8	2741E-05	2	5695E-04	-8	3693E-04	404	8	7048E-05	0	0000E+00	-9	9530E-04
396	1	9730E-04	1	6941E-21	-7	3868E-04	408	1	6387E-05	4	0255E-04	-5	6265E-04
399	1	7967E-04	6	3336E-04	-4	0260E-04	412	1	1784E-04	3	9313E-04	-5	3585E-04
402	2	4464E-04	4	7257E-04	-4	0218E-04	416	3	3977E-04	0	0000E+00	-4	8911E-04
405	4	0682E-04	-3	3881E-21	-3	6841E-04	420	7	7774E-05	-2	3142E-04	-2	3476E-03
408	-3	3708E-04	-4	1100E-04	-1	5898E-03	424	9	4785E-05	1	0091E-04	-1	8557E-03
411	-2	1310E-04	-1	4349E-04	-1	2687E-03	428	7	1993E-05	8	4703E-22	-1	5977E-03
414	-2	4524E-04	5	0822E-21	-1	1269E-03	432	2	5879E-04	3	3360E-04	-8	4193E-04
417	2	2791E-04	2	1155E-04	-8	2143E-04	436	2	3445E-04	3	1896E-04	-7	9153E-04
420	7	4927E-05	1	8443E-04	-7	1026E-04	440	2	8409E-04	0	0000E+00	-7	3063E-04
423	5	2644E-05	4	2352E-22	-6	0826E-04	444	3	7168E-04	6	5633E-04	-2	9989E-04
426	4	4309E-04	6	3565E-04	-2	0928E-04	448	3	5205E-04	5	1865E-04	-3	4850E-04



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429	2. 6795E-04	4. 5973E-04	-2. 9796E-04	431	4. 4552E-04	-3. 3881E-21	-3. 3724E-04
432	2. 7844E-04	0. 0000E+00	-2. 7819E-04	433	1. 2068E-03	-2. 8564E-25	1. 4442E-04
435	1. 1236E-03	2. 4348E-04	1. 8227E-04	439	3. 3413E-04	-3. 4762E-25	3. 2616E-04
441	3. 3566E-04	-3. 0902E-05	3. 7599E-04	445	2. 4688E-04	-6. 7677E-25	2. 7802E-03
447	3. 5649E-04	-1. 6229E-04	2. 8798E-03	449	-5. 5433E-04	1. 1970E-25	7. 7720E-04
471	-5. 4740E-04	-6. 0813E-05	7. 7463E-04	473	-5. 2811E-04	-1. 4209E-04	7. 7480E-04
475	-6. 6300E-04	-5. 1226E-26	1. 3890E-03	477	-6. 7506E-04	-1. 0386E-04	1. 4033E-03
479	-6. 5327E-04	-1. 6269E-04	1. 3946E-03	481	-6. 1867E-04	-1. 4912E-25	2. 1584E-03
483	-6. 2307E-04	-8. 5193E-05	2. 1587E-03	485	-6. 1005E-04	-1. 3426E-04	2. 1568E-03
487	1. 0207E-03	-1. 9833E-04	6. 7159E-04	489	1. 0163E-03	-1. 4538E-04	7. 3507E-04
491	1. 0299E-03	2. 2807E-25	6. 7628E-04	493	9. 6118E-04	-3. 1591E-04	1. 3913E-03
495	1. 0418E-03	-2. 6846E-04	1. 4392E-03	497	1. 2020E-03	-2. 6830E-25	1. 1533E-03
499	9. 2658E-04	1. 4573E-04	2. 2035E-03	501	8. 7334E-04	-2. 2394E-04	2. 1733E-03
503	1. 4925E-03	-3. 7615E-25	1. 6725E-03	505	6. 7949E-04	-7. 1677E-04	4. 9281E-04
507	7. 8321E-04	-3. 6600E-04	6. 0469E-04	511	7. 1937E-04	-3. 5131E-04	1. 2984E-03
513	8. 4307E-04	-4. 4852E-04	1. 3065E-03	517	8. 0677E-04	1. 1381E-04	1. 9589E-03
519	9. 3106E-04	-2. 8827E-05	2. 1499E-03	523	2. 5801E-04	-4. 8893E-04	3. 3003E-04
525	4. 2523E-04	-4. 9412E-04	4. 0533E-04	529	3. 3832E-04	-3. 5164E-04	9. 7207E-04
531	4. 8611E-04	-4. 0063E-04	1. 0985E-03	535	5. 8550E-04	-1. 5200E-04	1. 6719E-03
537	6. 7702E-04	-1. 1962E-04	1. 7717E-03	541	1. 9294E-04	8. 4207E-26	2. 1426E-04
542	1. 2640E-03	3. 6606E-25	6. 3613E-05	543	2. 2297E-04	-2. 2297E-04	2. 6231E-04
544	1. 2124E-03	2. 6282E-04	8. 1923E-05	547	2. 0591E-04	-1. 0224E-25	8. 5702E-04
548	1. 2179E-03	1. 5155E-25	1. 4631E-04	549	2. 4156E-04	-2. 0161E-04	8. 9564E-04
550	1. 1651E-03	2. 2383E-04	1. 7679E-04	553	4. 5618E-04	-1. 9888E-25	1. 5184E-03
555	4. 8460E-04	-1. 0214E-04	1. 5467E-03	559	-5. 0507E-04	-1. 9704E-04	7. 7817E-04
581	-5. 3846E-04	3. 3881E-21	7. 7527E-04	585	-6. 0800E-04	-2. 5191E-04	1. 3938E-03
587	-6. 6229E-04	0. 0000E+00	1. 3980E-03	591	-5. 6317E-04	-1. 9690E-04	2. 1764E-03
615	-6. 9338E-04	-8. 3236E-05	-3. 9626E-03	617	-6. 9751E-04	-4. 2532E-25	-3. 9614E-03
619	-5. 5537E-04	-1. 0772E-26	-1. 5695E-03	621	-5. 5462E-04	-6. 8922E-05	-1. 5675E-03
623	-5. 3378E-04	-1. 2637E-04	-1. 5682E-03	625	-3. 9372E-04	4. 2402E-26	-7. 4856E-04
627	-3. 9201E-04	-4. 6418E-05	-7. 4861E-04	629	3. 7568E-04	-9. 2481E-05	-7. 4922E-04
631	7. 5039E-04	-8. 2771E-04	-3. 4294E-03	633	1. 0818E-03	-1. 6303E-03	-2. 8329E-03
635	1. 1292E-04	-8. 5368E-25	-4. 0128E-03	637	5. 1309E-04	-7. 9131E-04	-1. 3039E-03
639	6. 1780E-04	-1. 3436E-03	-1. 4070E-03	641	-6. 8578E-05	-7. 8161E-25	-1. 4348E-03
643	5. 8101E-04	-4. 5797E-04	-6. 0445E-04	645	6. 5917E-04	-8. 0114E-04	-9. 0183E-04
647	3. 0661E-04	-2. 6568E-25	-5. 9574E-04	649	1. 1445E-04	-8. 8316E-04	-3. 1201E-03
651	4. 6373E-04	-8. 0339E-04	-3. 3459E-03	655	7. 2140E-05	-6. 2746E-04	-8. 7365E-04
657	3. 4513E-04	-6. 8641E-04	-1. 1075E-03	661	2. 3152E-04	-3. 3219E-04	-3. 7888E-04
663	4. 5761E-04	-4. 1510E-04	-5. 0236E-04	667	-6. 5316E-04	-1. 2689E-03	-2. 2233E-03
669	-3. 9263E-04	-1. 1159E-03	-2. 6731E-03	673	-1. 8208E-04	-5. 9076E-04	-7. 6297E-04
675	-1. 6650E-04	-6. 0690E-04	-6. 6332E-04	679	-1. 5505E-04	-1. 0381E-04	-1. 3244E-04
681	-3. 0827E-05	-2. 3237E-04	-2. 2968E-04	685	-8. 8115E-04	-6. 0413E-26	-2. 1349E-03
687	-1. 1282E-03	-1. 2411E-03	-1. 5296E-03	688	-8. 2221E-04	-9. 6311E-04	-1. 5911E-03
691	-3. 3889E-04	-5. 4148E-25	-4. 9526E-04	692	-2. 0812E-05	-1. 3719E-25	-3. 1425E-04
693	-4. 5484E-04	-7. 3363E-04	-8. 7430E-04	694	7. 6350E-06	-4. 4331E-04	-8. 2736E-04



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697	-4	0188E-04	-1	3822E-25	-7	2174E-05	698	1	6329E-04	5	7919E-25	-1	6720E-04
699	-3	2898E-04	-1	3347E-04	-8	3748E-05	700	2	9357E-04	-2	9561E-04	-1	6679E-04
704	1	9407E-24	-7	1506E-25	-2	0194E-03	705	0	0000E+00	-2	9561E-04	-1	8037E-03
708	8	4703E-22	-2	0245E-04	-1	6723E-03	710	1	4665E-24	-2	5671E-25	-5	6856E-04
712	0	0000E+00	-9	4839E-05	-7	5476E-04	714	0	0000E+00	1	9369E-05	-6	7684E-04
716	1	0728E-24	3	7245E-25	-2	6199E-25	718	4	2352E-22	1	9458E-04	-1	4280E-25
720	1	6941E-21	2	4443E-04	-1	0322E-25	723	-6	2336E-04	-2	5189E-04	-3	9628E-03
725	-6	7223E-04	0	0000E+00	-3	6419E-03	729	-4	9911E-04	-2	0427E-04	-1	5663E-03
731	-5	4099E-04	0	0000E+00	-1	5641E-03	735	-3	5220E-04	-1	3999E-04	-7	5048E-04
737	-3	7810E-04	3	3881E-21	-7	4990E-04	742	4	2352E-22	-8	1401E-05	-1	5440E-03
744	2	5034E-25	-2	3425E-25	-1	4962E-03	748	-4	2352E-22	6	8958E-03	-5	6716E-04
750	-4	6780E-25	-3	8248E-25	-5	1294E-04	754	1	6941E-21	1	7391E-04	2	0462E-26
756	9	9434E-26	-2	4375E-25	-1	6886E-26	757	-1	0503E-03	-4	2828E-25	-4	4745E-03
758	9	3370E-25	-4	0034E-25	-3	8351E-03	759	-1	0569E-03	-4	1982E-05	-4	3761E-03
760	0	0000E+00	7	4894E-03	-3	7542E-03	761	-1	0813E-03	-1	5364E-04	-4	1417E-03
762	4	2352E-22	7	2835E-05	-3	5822E-03	763	-1	3900E-03	-2	2326E-26	-3	1179E-03
764	1	1281E-24	-3	1269E-26	-2	9742E-03	765	-1	3293E-03	-1	6359E-04	-2	9614E-03
766	-1	3235E-23	3	5371E-06	-2	7224E-03	767	-1	2184E-03	-2	8722E-04	-2	7489E-03
768	0	0000E+00	-4	5970E-05	-2	4860E-03	777	-1	1189E-03	-3	6243E-04	-3	8665E-03
778	0	0000E+00	4	8124E-05	-3	4593E-03	779	-1	0550E-03	0	0000E+00	-2	5593E-03
780	9	5253E-25	3	949E-25	-3	4173E-03	783	-1	1511E-03	-4	8318E-04	-2	5067E-03
784	0	0000E+00	-2	9747E-05	-2	3813E-03	785	-1	2518E-03	-1	3553E-20	-2	1179E-04
786	1	1006E-24	4	4191E-26	-2	3543E-03	799	-3	2574E-04	-5	4771E-26	-2	1037E-04
800	5	5731E-04	7	6016E-26	-2	0801E-04	801	-3	2125E-04	-3	4066E-05	-2	1188E-04
802	5	5245E-04	8	7516E-05	-2	0721E-04	803	-3	0752E-04	-8	1984E-05	-2	4878E-04
804	5	5262E-04	1	6772E-04	-2	1005E-04	805	-2	9669E-04	-6	1895E-26	2	4906E-04
806	5	9573E-04	7	0703E-26	2	8228E-04	807	-2	9479E-04	-3	3739E-05	2	4915E-04
808	5	9297E-04	8	6107E-05	2	8343E-04	809	-2	8396E-04	-7	3030E-05	-2	4915E-04
810	5	8990E-04	1	7718E-04	2	8446E-04	823	5	7501E-04	-1	5486E-04	-1	6898E-04
824	-9	3504E-05	4	1810E-04	-1	9353E-04	825	6	4590E-04	-2	5593E-04	-2	3025E-04
826	-2	0529E-04	2	4769E-04	-2	0434E-04	827	6	2108E-04	1	5021E-26	-2	7212E-04
828	-2	1248E-04	6	8437E-25	-2	1281E-04	829	6	1275E-04	-1	5743E-04	1	6729E-04
830	-3	0336E-05	4	4445E-04	2	3382E-04	831	6	6774E-04	-1	0096E-04	1	8027E-04
832	-1	6279E-04	2	5010E-04	2	4788E-04	833	6	8517E-04	-8	0141E-26	1	6894E-04
834	-1	9567E-04	6	4008E-25	-7	4555E-05	847	3	7830E-04	-1	9548E-04	-6	4277E-05
848	3	6355E-04	7	5482E-04	-1	3574E-04	849	4	8031E-04	-2	1296E-04	-1	3174E-04
850	1	2899E-04	5	5584E-04	-1	3574E-04	853	5	1238E-04	-1	7412E-04	1	3343E-04
854	5	1211E-04	7	4244E-04	1	6274E-04	855	5	8828E-04	-4	2539E-05	1	5531E-04
856	2	3209E-04	5	1309E-04	2	1020E-04	871	1	4714E-04	-4	7515E-05	7	9840E-05
872	8	1802E-04	6	9146E-04	-2	4873E-05	873	2	4014E-04	-1	1027E-04	1	3191E-05
874	5	9567E-04	7	5356E-04	-2	2287E-05	877	3	6705E-04	-1	6785E-05	7	9328E-05
878	1	0176E-03	6	5558E-04	7	9182E-05	879	4	3913E-04	-4	2518E-05	1	0719E-04
880	7	6651E-04	7	2035E-04	1	2895E-04	895	4	3391E-05	-1	4593E-25	1	3131E-04
896	8	7832E-04	3	0035E-25	3	0650E-05	897	7	2552E-05	-3	3054E-05	1	1667E-04
898	8	8110E-04	3	2637E-04	1	4270E-05	901	2	8981E-04	-1	2575E-25	6	5052E-05
902	1	2078E-03	2	7231E-25	3	0423E-05	903	3	0713E-04	-2	8611E-05	5	9781E-05

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904	1 1577E-03	3 5762E-04	5 2593E-05	8 3783E-04	2 0695E-25	-7 9841E-05
922	7 5385E-04	2 6171E-04	-7 7404E-05	5 8785E-04	3 5854E-04	-7 9229E-05
926	1 0695E-03	1 3236E-25	-8 3074E-05	9 6133E-04	2 8828E-04	-8 0450E-05
930	7 5920E-04	4 1225E-04	-2 2070E-05	-2 9416E-04	-1 1267E-04	-2 1106E-04
946	5 3442E-04	2 3927E-04	-2 0948E-04	-3 1138E-04	0 0000E+00	-2 1153E-04
948	5 9802E-04	0 0000E+00	-2 1093E-04	-2 6905E-04	-1 0334E-04	2 4874E-04
952	5 7058E-04	2 4926E-04	2 8140E-04	-2 8623E-04	-3 3881E-21	2 5037E-04
954	6 3563E-04	6 7763E-21	2 8243E-04	5 6103E-04	5 6822E-04	-7 3020E-05
970	4 5685E-04	3 4208E-04	-8 0237E-05	5 9506E-04	0 0000E+00	-7 6569E-05
972	5 0190E-04	-3 3881E-21	-7 9318E-05	7 1895E-04	6 1037E-04	4 4266E-05
976	5 9670E-04	3 9288E-04	-5 5837E-05	7 2310E-04	0 0000E+00	2 9598E-06
978	6 5294E-04	0 0000E+00	-5 6094E-05	5 1730E-04	5 1933E-26	-2 0935E-04
998	1 3445E-04	1 2704E-04	-2 1060E-04	4 8933E-05	1 7147E-04	-2 2009E-04
1004	2 1325E-04	3 4967E-26	2 6463E-04	1 7764E-04	1 1587E-04	2 5992E-04
1010	9 3810E-05	1 8662E-04	2 5957E-04	2 1230E-04	5 7612E-05	2 0750E-25
1023	-4 8677E-26	-2 5978E-26	-6 2379E-26	2 0072E-04	-9 9189E-27	6 1893E-25
1026	2 6470E-23	1 0744E-05	1 4791E-25	1 8234E-04	8 5728E-03	6 1722E-25
1029	0 0000E+00	1 2771E-05	1 4926E-25	2 6196E-04	1 2761E-25	-1 3293E-04
1032	-1 6982E-25	6 1932E-26	-1 6280E-04	2 4718E-04	5 5350E-05	-1 3473E-04
1035	0 0000E+00	9 3958E-06	-1 6257E-04	2 2244E-04	8 5321E-05	-1 3381E-04
1038	-5 2940E-23	1 0205E-05	-1 6187E-04	3 2096E-04	1 3989E-25	-2 7096E-04
1041	-1 5689E-25	6 7035E-26	-3 2296E-04	3 0238E-04	6 8781E-05	-2 6644E-04
1044	2 6470E-23	1 0398E-05	-3 2110E-04	2 6933E-04	1 0437E-04	-2 6133E-04
1047	-5 2940E-23	1 4060E-05	-3 1880E-04	9 0363E-05	1 6894E-04	-2 2341E-04
1071	3 3441E-05	3 9753E-04	-1 8125E-04	1 5486E-04	0 0000E+00	-2 2577E-04
1074	3 1812E-04	0 0000E+00	-1 6294E-04	1 3693E-04	1 9051E-04	2 5917E-04
1080	1 2513E-04	4 4514E-04	2 2925E-04	2 1095E-04	0 0000E+00	2 5916E-04
1083	4 3530E-04	-3 3881E-21	2 2034E-04	2 7014E-04	5 3247E-04	-1 3620E-04
1107	4 3712E-04	5 9755E-04	-8 3222E-05	5 4565E-04	0 0000E+00	-1 1168E-04
1110	6 3373E-04	0 0000E+00	-7 6443E-05	3 8666E-04	6 0020E-04	1 8892E-04
1116	5 8452E-04	6 6043E-04	1 4656E-04	6 7844E-04	0 0000E+00	1 8587E-04
1119	7 8557E-04	6 7763E-21	1 3102E-04	5 3939E-04	6 102E-04	-6 0376E-05
1145	6 5148E-04	6 7763E-21	-6 2698E-05	6 8423E-04	6 6281E-04	8 9621E-05
1154	7 8488E-04	-6 7763E-21	7 0915E-05	1 6063E-04	9 8234E-05	6 0878E-25
1170	-5 2940E-23	1 0699E-05	1 5163E-25	1 8034E-04	0 0000E+00	2 0187E-25
1173	-3 7437E-26	5 9816E-27	-5 9655E-26	1 9670E-04	1 0471E-04	-1 3274E-04
1179	5 2940E-23	9 0811E-06	-1 6103E-04	2 1450E-04	0 0000E+00	-1 3281E-04
1182	-1 5188E-25	-9 9069E-26	-1 6081E-04	2 3805E-04	1 2628E-04	-2 5705E-04
1188	0 0000E+00	1 0390E-05	-3 1660E-04	2 5961E-04	-1 6941E-21	-2 5360E-04
1191	-1 5009E-25	-1 0418E-25	-3 1583E-04	4 9634E-04	2 2314E-24	1 2648E-03
1202	9 8953E-05	-4 5653E-07	1 3151E-03	-3 4149E-04	3 4138E-24	2 0995E-03
1204	-9 4433E-05	2 9815E-24	1 1440E-03	2 2616E-04	8 4450E-05	1 2361E-03
1206	1 0450E-04	1 7885E-24	2 0901E-03	3 5011E-04	-2 0673E-05	1 2589E-03
1208	1 2065E-03	4 6682E-24	1 8642E-03	5 4281E-04	1 3255E-04	1 2689E-03
1210	1 0785E-04	5 3455E-05	1 3100E-03	-5 7330E-04	-8 3007E-05	2 1071E-03
1212	-1 0032E-04	1 9741E-04	1 2254E-03	1 4608E-04	1 5815E-04	1 2626E-03

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1214	2	5020E-04	-2	4395E-04	2	3673E-04	4	4217E-05	1	2027E-03
1216	8	4535E-04	-4	2082E-04	5	5928E-04	1	5188E-04	1	2820E-03
1218	-5	5558E-04	-3	7892E-05	-7	0371E-05	2	4222E-04	1	1966E-03
1220	1	4663E-04	9	0349E-05	8	2588E-04	-4	4880E-04	1	6869E-03
1222	2	3233E-04	7	2071E-25	-4	3920E-04	-1	6769E-04	2	9822E-03
1224	-5	2140E-04	4	0239E-24	1	6873E-04	-1	5024E-03	2	8108E-03
1226	4	2590E-04	-1	0268E-24	3	6135E-04	2	1639E-24	3	7325E-03
1228	6	0514E-04	-3	9095E-04	1	6829E-03	5	3152E-24	3	6328E-03
1230	3	3858E-04	1	9902E-04	-4	5376E-04	-1	2548E-04	2	9702E-03
1232	-5	7736E-04	-1	0402E-04	1	6314E-04	-2	418E-04	2	7883E-03
1234	3	3306E-04	-1	1896E-04	5	2495E-04	-3	3633E-04	3	6262E-03
1236	7	1967E-04	-4	3497E-04	1	3706E-03	-4	5230E-04	3	3443E-03
1238	4	8601E-04	4	2334E-05	-6	0820E-04	-7	9862E-05	4	0170E-03
1240	2	6022E-04	-4	8661E-05	5	2971E-04	3	2758E-05	3	4833E-03
1242	1	3337E-03	-4	6509E-04	3	2045E-04	3	8415E-24	5	3813E-03
1244	-3	8314E-04	-6	5250E-05	1	0776E-03	4	6614E-24	5	2444E-03
1246	7	3456E-04	1	2616E-04	1	7998E-03	-1	2307E-04	5	0391E-03
1248	4	2716E-04	1	6233E-04	-3	4279E-04	-7	8147E-05	5	7178E-03
1250	1	1133E-03	1	8908E-04	8	1313E-04	2	5052E-04	4	7958E-03
1252	1	7097E-03	-2	4143E-04	5	5150E-04	1	4855E-04	5	1206E-03
1254	1	2298E-03	1	1232E-04	1	6288E-03	1	5067E-24	5	2179E-07
1256	1	1641E-03	1	2656E-04	3	8496E-04	3	2157E-24	1	0350E-04
1258	1	3944E-03	2	1124E-04	1	3514E-03	1	1073E-24	1	1490E-04
1260	1	5924E-03	4	5409E-04	1	0826E-03	3	2628E-04	2	1030E-04
1262	3	7150E-04	-3	2289E-05	1	6024E-04	4	9072E-04	-3	4677E-05
1264	1	2605E-03	3	9428E-04	1	3308E-03	7	9272E-04	5	0418E-05
1266	5	5457E-04	1	0941E-04	1	0239E-03	5	0810E-04	1	5650E-04
1268	1	0378E-03	1	3710E-25	3	0618E-04	-1	8980E-05	3	3016E-04
1270	-1	2640E-04	3	7750E-24	1	0972E-03	1	4561E-04	3	3883E-04
1272	8	5634E-04	-1	0021E-24	1	1090E-03	2	5852E-04	4	7471E-04
1274	3	9179E-04	-6	8341E-05	-7	7019E-05	-1	9883E-04	1	2033E-03
1276	9	9632E-04	3	6589E-04	9	0890E-04	1	7220E-04	5	5901E-04
1278	1	0908E-03	5	5682E-04	2	3464E-04	-3	3007E-04	1	4641E-03
1280	9	6349E-04	2	9828E-04	8	6354E-04	2	8884E-24	2	3822E-03
1282	2	4722E-04	-9	0627E-05	1	1455E-03	9	5445E-05	1	8845E-03
1284	1	0402E-03	7	3769E-05	5	0560E-04	-2	2294E-04	3	0286E-03
1286	1	2948E-03	3	3265E-04	1	2707E-03	3	3554E-04	2	3543E-03
1288	7	6777E-04	6	0223E-25	-2	2484E-04	-1	7482E-25	-5	1330E-04
1292	4	0679E-04	4	6609E-05	-3	9670E-04	-3	8409E-25	-4	5316E-04
1294	0	0000E+00	4	1294E-06	5	4894E-04	-5	1069E-26	-6	6076E-04
1296	7	1044E-04	1	5175E-04	1	7058E-04	3	0831E-05	-5	1362E-04
1300	3	7871E-04	1	0215E-04	-2	6470E-23	7	4280E-05	-4	6185E-04
1302	5	2940E-23	1	1939E-05	-3	8763E-04	9	2599E-06	-6	6408E-04
1304	6	1179E-04	2	5336E-04	1	5109E-04	5	7245E-05	-5	1696E-04
1307	3	6110E-04	1	1070E-04	2	6470E-23	5	2150E-06	-6	7065E-04
1309	6	8305E-04	1	1335E-24	2	0007E-04	9	8394E-26	-7	1340E-04

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1313	4 2006E-04	4 0183E-05	5 4590E-04	1314	4 9819E-04	-9 7314E-25	-5 6116E-04
1315	1 6544E-24	8 6175E-07	-7 7044E-04	1316	-1 1369E-24	2 2047E-24	-7 8536E-04
1317	6 5691E-04	1 1662E-04	-1 6636E-04	1320	2 0327E-04	3 0165E-05	-7 2067E-04
1321	4 1122E-04	9 0478E-05	-5 5317E-04	1322	4 9795E-04	7 7487E-05	-5 6649E-04
1323	0 0000E+00	7 4603E-06	-7 7449E-04	1324	0 0000E+00	3 2131E-06	-7 8751E-04
1325	6 3272E-04	2 1828E-04	-2 1662E-04	1327	1 9135E-04	5 9365E-05	-7 3344E-04
1328	5 0071E-04	1 4432E-04	-5 6873E-04	1329	-1 1581E-23	-3 9125E-07	-7 9432E-04
1330	1 0650E-03	4 3552E-24	9 7165E-04	1332	3 0976E-04	3 6952E-24	4 2427E-04
1333	6 3684E-04	4 6926E-05	6 0814E-04	1334	-1 2408E-24	4 5265E-07	3 7572E-04
1335	1 0556E-03	1 8159E-04	9 4026E-04	1337	3 0926E-04	4 4305E-05	4 2524E-04
1338	6 3291E-04	1 2971E-04	5 9314E-04	1339	-2 6470E-23	5 6816E-06	3 6900E-04
1340	1 0282E-03	3 4320E-04	8 9830E-04	1341	3 0089E-04	8 7832E-05	4 1874E-04
1343	1 1829E-04	1 2992E-04	1 2928E-03	1346	4 7319E-05	1 4894E-04	1 2432E-03
1348	1 7979E-04	3 4068E-04	9 8886E-04	1350	5 9933E-04	2 5223E-04	1 2849E-03
1351	1 5034E-04	1 1014E-04	1 2849E-03	1352	-4 5995E-04	-5 8089E-05	2 1114E-03
1353	1 2134E-05	2 3524E-04	1 1013E-03	1354	6 2556E-05	1 3739E-04	1 2386E-03
1355	1 1743E-04	1 7287E-04	2 0385E-03	1356	3 2150E-04	3 6811E-04	8 3599E-04
1357	3 7291E-04	2 2371E-04	1 5891E-03	1358	6 4262E-04	-6 7763E-21	1 2834E-03
1359	-3 4875E-04	0 0000E+00	2 1173E-03	1360	1 9216E-04	1 6941E-21	1 0369E-03
1361	1 5034E-04	-1 6941E-21	2 0086E-03	1362	5 6509E-04	0 0000E+00	1 4547E-03
1364	-3 9134E-04	2 4791E-05	2 9570E-03	1367	2 0480E-04	4 1622E-05	2 8407E-03
1369	5 7759E-04	-2 5089E-05	2 2849E-03	1371	5 4047E-04	1 6579E-04	2 9753E-03
1372	-2 6183E-04	-6 2853E-05	2 9485E-03	1373	-5 4696E-04	-1 2466E-04	4 0090E-03
1374	2 4668E-04	1 2505E-04	2 5937E-03	1375	1 6092E-04	1 4095E-04	2 8207E-03
1376	4 9028E-04	1 9294E-04	3 368E-03	1377	4 9236E-04	2 9018E-04	2 2037E-03
1378	8 3215E-04	1 9676E-04	3 0102E-03	1379	5 9123E-04	6 7763E-21	2 9629E-03
1380	-4 9560E-04	0 0000E+00	4 0079E-03	1381	3 4345E-04	0 0000E+00	2 5354E-03
1382	5 2922E-04	3 3881E-21	3 2859E-03	1383	8 8589E-04	0 0000E+00	2 7913E-03
1385	-2 5674E-04	-1 6908E-05	5 7225E-03	1387	8 0572E-04	2 7607E-04	4 6705E-03
1388	1 4149E-03	2 1373E-05	4 5833E-03	1389	5 9709E-04	2 5596E-04	5 0590E-03
1390	-1 8791E-04	-6 8751E-05	5 7192E-03	1391	1 0434E-03	3 1733E-04	4 5291E-03
1392	7 5520E-04	3 9911E-04	4 5454E-03	1393	1 1756E-03	4 5890E-04	4 2470E-03
1394	6 9689E-04	0 0000E+00	4 9820E-03	1395	1 0838E-03	6 7763E-21	4 4113E-03
1396	3 9451E-04	2 7250E-04	1 0111E-03	1399	6 4057E-04	5 0368E-04	7 4273E-04
1400	4 3164E-04	6 2720E-04	7 6148E-04	1401	9 1361E-04	-4 9172E-04	1 2685E-03
1402	7 2228E-04	9 4117E-04	4 9703E-04	1403	8 1196E-04	-2 7615E-04	8 8983E-04
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1408	6 4149E-04	5 6011E-04	5 9638E-04	1409	6 1420E-04	4 7469E-04	1 2535E-03
1410	8 4704E-04	6 8937E-04	4 1659E-04	1411	8 3617E-04	7 7909E-04	9 3203E-04
1412	7 2598E-04	6 7763E-21	6 7219E-04	1414	1 0279E-03	-6 7763E-21	4 7259E-04
1415	9 2686E-04	0 0000E+00	1 1267E-03	1416	1 1452E-03	0 0000E+00	8 1094E-04
1417	8 3587E-04	-2 4978E-04	2 1746E-03	1420	8 5126E-04	-8 7367E-03	1 7066E-03
1421	6 8199E-04	2 6026E-04	1 9197E-03	1422	1 2622E-03	-5 7312E-04	2 7960E-03
1423	7 9916E-04	3 4503E-04	1 4721E-03	1424	9 7643E-04	-5 4709E-04	2 2806E-03
1425	6 0808E-04	2 6483E-04	2 0428E-03	1428	7 8287E-04	5 0596E-04	1 6316E-03
1429	7 5504E-04	4 8095E-04	1 7997E-03	1430	8 9935E-04	3 6048E-04	2 5935E-03

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1431	9	0823E-04	6	4134E-04	1	3882E-03	1432	9	8990E-04	5	0908E-04	2	0109E-03
1433	8	0703E-04	6	7763E-21	1	9496E-03	1435	1	0865E-03	-6	7763E-21	1	5307E-03
1436	1	0490E-03	0	0000E+00	2	2636E-03	1437	1	1439E-03	0	0000E+00	1	5823E-03
1438	1	6081E-03	-1	7185E-04	4	6325E-03	1440	1	4864E-03	-1	5109E-04	4	2708E-03
1441	1	4119E-03	1	9038E-04	4	2136E-03	1442	1	4292E-03	3	5001E-04	3	6958E-03
1443	1	3338E-03	3	0025E-04	4	1908E-03	1445	1	4339E-03	4	8434E-04	3	6259E-03
1446	1	3739E-03	6	1994E-04	3	7494E-03	1447	1	5078E-03	7	7915E-04	3	0550E-03
1448	1	4389E-03	0	0000E+00	3	9337E-03	1449	1	6877E-03	0	0000E+00	3	2605E-03
1450	8	6366E-04	6	4144E-04	5	0250E-04	1453	9	3927E-04	4	9781E-04	3	4111E-04
1454	1	0166E-03	1	0506E-03	2	9480E-04	1455	5	4396E-04	-1	1501E-04	5	4317E-04
1456	1	1785E-03	8	8971E-04	1	4960E-04	1458	8	3569E-04	8	3570E-04	3	4361E-04
1461	9	5772E-04	8	2292E-04	2	0751E-04	1462	8	9111E-04	6	5312E-04	2	7958E-04
1463	9	8464E-04	8	8665E-04	6	6147E-04	1464	8	2546E-04	5	8648E-04	1	6252E-04
1465	1	0455E-03	8	1590E-04	4	4798E-04	1466	1	0925E-03	-6	7763E-21	3	3658E-04
1468	9	9057E-04	-6	7763E-21	1	8913E-04	1469	1	0734E-03	0	0000E+00	5	3278E-04
1470	9	4902E-04	0	0000E+00	2	6206E-04	1471	7	4278E-04	-2	6538E-06	1	1517E-03
1474	5	0998E-04	-5	1619E-05	7	0886E-04	1475	9	4514E-04	6	9597E-04	1	0975E-03
1476	5	2432E-04	-5	0540E-04	1	7671E-03	1477	9	9003E-04	5	8336E-04	7	9343E-04
1478	8	8783E-04	6	8510E-04	1	2350E-03	1482	9	6489E-04	7	1247E-04	9	0039E-04
1483	9	2723E-04	6	1371E-04	9	6076E-03	1484	1	0370E-03	5	4544E-04	1	4247E-03
1485	8	5194E-04	5	5012E-04	5	8012E-04	1486	1	0536E-03	4	9022E-04	9	8982E-04
1487	1	1280E-03	0	0000E+00	1	0671E-03	1489	1	0121E-03	6	7763E-21	5	9938E-04
1490	1	1270E-03	0	0000E+00	9	4720E-04	1491	1	0985E-03	6	7763E-21	4	1949E-04
1492	1	2444E-03	-1	9255E-04	3	7587E-03	1494	8	4505E-04	-2	4559E-04	3	3171E-03
1495	1	4107E-03	4	2052E-04	2	1854E-03	1496	1	3048E-03	3	5084E-04	2	7595E-03
1497	1	4770E-03	6	4852E-04	2	9896E-03	1499	1	4921E-03	7	1590E-04	2	4503E-03
1500	1	5225E-03	8	2644E-03	2	3548E-03	1501	1	4347E-03	7	9430E-04	1	8252E-03
1502	1	7818E-03	0	0000E+00	2	4896E-03	1503	1	6555E-03	-1	3553E-20	1	8334E-03
1507	8	4763E-04	5	0421E-04	2	1099E-05	1509	8	3577E-04	6	0331E-04	1	0522E-04
1512	7	4045E-04	4	6821E-04	3	7270E-05	1513	8	0261E-04	5	2012E-04	1	5700E-04
1514	9	1575E-04	6	7763E-21	7	2621E-05	1516	8	5542E-04	0	0000E+00	1	5505E-04
1520	8	4252E-04	4	1290E-04	2	6011E-04	1522	8	4221E-04	5	3444E-04	4	8358E-04
1525	7	8261E-04	4	4870E-04	2	2116E-04	1526	9	3812E-04	4	6014E-04	2	9313E-04
1527	9	4552E-04	0	0000E+00	2	9974E-04	1529	1	0516E-03	6	7763E-21	2	2738E-04
1532	1	3296E-03	5	3178E-04	1	5266E-03	1533	1	3955E-03	6	9292E-04	1	7768E-03
1535	1	2868E-03	6	8500E-04	1	4039E-03	1536	1	5001E-03	-1	3553E-20	1	4865E-03
1541	3	3709E-04	1	5059E-04	-4	1165E-04	1543	0	0000E+00	6	2118E-06	-5	5992E-04
1545	5	2486E-04	2	6626E-04	-2	1297E-04	1548	1	3878E-04	6	6528E-05	-5	2375E-04
1549	2	9653E-04	1	6514E-04	-4	1492E-04	1550	3	2797E-04	1	6019E-04	-4	8729E-04
1551	0	0000E+00	4	8791E-06	-5	6463E-04	1552	0	0000E+00	8	7501E-06	-6	7705E-04
1553	5	6447E-04	0	0000E+00	-2	1214E-04	1555	1	5219E-04	1	6941E-21	-5	2602E-04
1556	3	5588E-04	0	0000E+00	-4	9406E-04	1557	3	4532E-25	9	6420E-26	-6	8007E-04
1562	3	9437E-04	1	5280E-04	-5	7009E-04	1564	0	0000E+00	2	0819E-06	-7	8372E-04
1566	5	9613E-04	2	6667E-04	-2	6807E-04	1569	1	8385E-04	8	0558E-05	-7	4327E-04
1570	3	6635E-04	1	9218E-04	-5	8554E-04	1571	4	7971E-04	2	1518E-04	-6	0430E-04
1572	0	0000E+00	2	4180E-06	-7	8901E-04	1573	2	6470E-23	4	3390E-06	-8	0346E-04

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1574	6.4882E-04	-6.7763E-21	-2.8916E-04	1576	2.0215E-04	1.6941E-21	-7.4747E-04
1577	5.2252E-04	0.0000E+00	-6.1206E-04	1578	-1.1093E-24	-2.1695E-24	-8.0807E-04
1582	6.2454E-04	2.1843E-04	5.7311E-04	1583	0.0000E+00	7.8286E-06	3.6087E-04
1584	9.8255E-04	4.4561E-04	8.6115E-04	1586	2.8985E-04	1.2544E-04	4.1003E-04
1587	5.9501E-04	3.0031E-04	5.5707E-04	1588	2.6470E-23	3.4978E-06	3.5621E-04
1589	1.0694E-03	1.3533E-20	8.5244E-04	1590	3.2015E-04	-3.3881E-21	4.0654E-04
1591	1.4960E-04	-7.8613E-25	8.1541E-04	1592	-5.5149E-04	-3.0660E-05	7.7587E-04
1593	-6.2655E-04	5.8941E-25	1.0219E-03	1594	4.3112E-04	4.0023E-05	7.6060E-04
1595	3.7369E-04	2.3670E-25	8.7954E-04	1596	1.5074E-04	2.2593E-05	8.1748E-04
1597	-5.3742E-04	-1.0104E-04	7.7480E-04	1598	-6.2720E-04	-8.6076E-05	1.0247E-03
1599	4.3706E-04	1.1030E-04	7.5914E-04	1600	3.6810E-04	4.0506E-05	8.8726E-04
1601	1.5268E-04	5.1179E-05	8.1634E-04	1602	-6.0700E-04	-1.4329E-04	1.0247E-03
1603	3.7352E-04	1.1625E-04	8.7130E-04	1604	-9.1526E-05	5.8072E-24	1.1772E-03
1605	-6.6919E-04	-4.8031E-05	1.3946E-03	1606	-7.4323E-04	6.7773E-25	1.7115E-03
1607	3.0577E-04	-5.4091E-06	1.0176E-03	1608	2.2529E-04	1.2790E-25	1.1054E-03
1609	-7.9964E-05	7.9384E-04	1.1698E-03	1610	-6.7141E-04	-1.3750E-04	1.3987E-03
1611	-7.5062E-04	-1.2104E-04	1.7153E-03	1612	3.0770E-04	7.7910E-05	1.0102E-03
1613	2.1396E-04	1.9539E-05	1.1200E-03	1614	-6.8557E-05	-1.2962E-05	1.1715E-03
1615	-7.3293E-04	-1.5833E-04	1.7041E-03	1616	2.3139E-04	9.0975E-05	1.1103E-03
1617	-1.5515E-04	6.5071E-25	2.0465E-03	1618	-6.1907E-04	-4.5676E-05	2.1612E-03
1620	-1.5657E-04	-4.4150E-06	2.0445E-03	1621	-6.1862E-04	-1.1887E-04	2.1573E-03
1623	-1.3535E-04	-2.0456E-05	2.0431E-03	1624	4.5317E-04	7.2025E-26	7.1081E-04
1627	1.1619E-06	6.2581E-26	6.4431E-04	1628	2.1938E-04	6.4403E-05	6.5907E-04
1629	2.2449E-04	1.3666E-25	7.6002E-04	1630	3.5617E-05	8.0765E-05	6.8688E-04
1631	8.9516E-05	3.9890E-26	7.7191E-04	1632	4.4492E-04	7.9612E-05	7.1027E-04
1635	-1.2493E-05	1.3454E-04	6.6066E-04	1636	1.6718E-04	1.4970E-04	6.7044E-04
1637	1.8764E-04	5.7804E-05	7.5925E-04	1638	7.5813E-05	2.0850E-04	6.7632E-04
1639	9.8141E-05	7.1066E-05	8.3221E-04	1640	4.2096E-04	1.5237E-04	7.1969E-04
1642	-1.2212E-05	2.2892E-04	6.6481E-04	1643	1.0364E-04	1.5490E-04	7.8728E-04
1644	1.6844E-04	2.5986E-04	7.4649E-04	1645	4.5260E-04	2.6075E-25	8.9693E-04
1648	-2.8922E-05	2.1191E-25	8.0017E-04	1649	2.0411E-04	1.4785E-05	8.9056E-04
1650	2.5140E-04	1.9921E-25	1.0454E-03	1651	1.7885E-04	1.5283E-25	9.7362E-04
1652	1.6618E-04	2.8062E-25	9.4608E-04	1653	4.5695E-04	1.2463E-04	8.9980E-04
1656	-3.9431E-06	1.1040E-04	8.3348E-04	1657	1.2329E-04	4.0776E-25	9.0936E-04
1658	1.9599E-04	4.9099E-05	1.0882E-03	1659	1.7430E-04	6.9536E-05	9.3728E-04
1660	2.1712E-04	-1.1734E-24	1.0876E-03	1661	4.6277E-05	1.4811E-04	9.1291E-04
1663	-5.4188E-05	-5.6468E-25	8.3464E-04	1664	5.3681E-05	1.7958E-04	1.0460E-03
1665	2.4079E-04	1.6492E-04	9.3900E-04	1678	3.5517E-04	-7.5485E-25	7.0200E-04
1679	1.0251E-03	-2.0677E-04	7.0979E-04	1680	1.0035E-03	-3.9557E-04	9.6060E-04
1683	3.4093E-04	8.6088E-05	7.7067E-04	1684	1.0025E-03	-1.3948E-25	7.0852E-04
1685	1.0601E-03	-2.3431E-04	1.0233E-03	1688	3.4974E-04	-8.1248E-25	7.2534E-04
1689	1.1339E-03	7.2359E-25	8.5718E-04	1691	4.9876E-04	-6.3380E-25	1.0510E-03
1692	1.0632E-03	-3.6471E-04	1.4988E-03	1693	1.0330E-03	-8.3004E-25	1.7334E-03
1696	5.4188E-04	-1.3088E-24	1.1769E-03	1697	1.145E-03	-1.7884E-04	1.3440E-03
1698	1.0427E-03	-4.2728E-04	1.7698E-03	1701	5.2992E-04	2.0604E-25	1.0087E-03
1702	1.4881E-03	1.1474E-24	1.4225E-03	1704	4.8339E-04	3.8610E-05	2.0035E-03



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1705	9	6857E-04	3	1401E-25	2	1213E-03	1707	5	5637E-04	-6	5704E-05	1	9782E-03
1708	7	5952E-04	1	4588E-25	2	1236E-03	1710	6	8731E-04	-1	3550E-03	1	5173E-03
1711	6	7073E-04	-2	9627E-25	5	0103E-04	1712	7	4151E-04	-5	1934E-04	5	4761E-04
1713	6	9765E-04	-5	9320E-04	8	5398E-04	1714	4	9535E-04	1	0546E-25	4	4225E-04
1715	6	6926E-04	4	7087E-04	4	1941E-04	1716	5	2206E-04	7	5631E-05	5	7661E-04
1717	7	8728E-04	-1	5987E-25	6	3939E-04	1718	8	3016E-04	-6	0141E-04	9	2733E-04
1719	2	0375E-04	2	0234E-04	5	6693E-04	1720	3	5536E-04	-5	6046E-25	6	1327E-04
1724	6	8055E-04	9	6078E-05	7	5353E-04	1725	7	9922E-04	-3	7165E-04	1	3194E-03
1726	7	4742E-04	4	1993E-25	1	5597E-03	1727	5	4422E-04	4	3510E-04	5	9231E-04
1728	7	3499E-04	5	0302E-04	5	0456E-04	1729	6	7010E-04	-7	3210E-25	1	0275E-03
1730	9	4003E-04	-4	7735E-04	1	3360E-03	1731	9	2428E-04	-4	9935E-04	1	6774E-03
1732	2	8985E-04	-5	8506E-25	8	0873E-04	1733	4	6269E-04	3	0480E-04	7	2902E-04
1737	8	1185E-04	4	0941E-04	1	7358E-03	1738	8	4543E-04	7	9051E-25	2	0504E-03
1740	6	4309E-04	2	8576E-04	1	7934E-03	1741	9	6912E-04	7	2828E-25	2	2344E-03
1744	8	0594E-04	4	5915E-25	2	8985E-04	1745	3	3309E-04	-4	2021E-04	3	6341E-04
1746	2	7271E-04	-4	5720E-04	6	0313E-04	1747	9	7828E-04	6	2921E-25	1	8381E-04
1748	1	0721E-03	3	4896E-04	1	7043E-04	1749	6	8505E-04	1	2464E-04	3	7685E-04
1750	5	6091E-04	-5	6103E-04	4	4791E-04	1751	4	3841E-04	-5	5831E-04	7	0995E-04
1752	7	6806E-04	4	2141E-04	2	9334E-04	1753	8	7249E-04	4	3355E-04	2	8293E-04
1757	7	5101E-04	5	9962E-05	5	5681E-04	1758	3	9920E-04	-4	1314E-04	1	0377E-03
1759	3	5910E-04	-3	0494E-04	1	2427E-03	1760	9	4676E-04	4	7089E-04	2	7581E-04
1761	1	0377E-03	4	3632E-04	1	8902E-04	1762	7	3116E-04	1	0124E-04	6	6536E-04
1763	6	0726E-04	-4	3956E-04	1	1966E-03	1764	5	2406E-04	-3	9388E-04	1	3783E-03
1765	7	9755E-04	5	3116E-04	4	3425E-04	1766	8	8250E-04	5	3051E-04	3	3957E-04
1770	9	0244E-04	1	8489E-04	1	3655E-03	1771	6	3330E-04	-1	4859E-04	1	7203E-03
1773	8	7885E-04	3	1351E-04	1	5054E-03	1774	7	5792E-04	-1	3317E-04	1	8637E-03
1777	9	3575E-04	-8	1169E-25	2	1488E-04	1778	2	1163E-04	-1	0868E-04	2	4893E-04
1781	1	6638E-04	6	7678E-25	4	8146E-04	1780	1	2463E-03	9	7862E-05	2	3488E-04
1783	2	6042E-04	3	5154E-25	1	0128E-04	1782	9	0469E-04	9	7862E-05	5	0754E-04
1785	1	1713E-03	-3	3077E-04	2	8986E-04	1784	1	9930E-04	-2	3182E-04	1	3258E-04
1790	7	9260E-04	2	8429E-04	1	0057E-04	1786	2	1842E-03	2	3214E-04	8	6667E-04
1792	2	1768E-04	8	2344E-25	4	4852E-04	1791	2	1680E-04	-1	0214E-04	1	5779E-04
1794	1	2048E-03	4	4763E-26	1	1157E-03	1793	1	2018E-03	1	1860E-04	4	7211E-04
1796	2	7778E-04	-2	8815E-04	9	7464E-05	1795	7	7219E-04	4	6744E-05	1	5986E-04
1798	1	1225E-03	3	1773E-04	9	3039E-04	1797	2	5179E-04	2	5179E-04	1	1508E-03
1803	9	3704E-04	6	8552E-25	1	8585E-04	1799	1	1450E-03	-2	2733E-04	1	3142E-04
1806	9	0546E-04	9	0842E-05	1	2811E-03	1804	4	7172E-04	-5	6701E-05	1	5281E-03
1810	1	3568E-03	6	0602E-27	1	3095E-03	1807	5	2402E-04	-1	2063E-04	1	5986E-04
1814	1	2997E-03	1	4884E-25	-6	3610E-05	1813	1	2012E-03	1	7375E-04	-1	3451E-04
1818	1	0069E-03	4	1156E-04	-1	4585E-04	1815	1	3019E-03	3	2897E-04	-5	1706E-05
1820	1	0705E-03	5	3925E-04	-1	0216E-04	1819	1	1697E-03	3	4806E-04	-1	2167E-04
1823	1	4533E-03	-2	0275E-05	-2	0275E-05	1822	9	2829E-04	4	6923E-04	-7	4031E-05
1827	1	4145E-03	1	6350E-25	-1	1105E-04	1826	1	3278E-03	1	9533E-04	-1	3274E-04
1831	1	0953E-03	2	1583E-25	-1	2039E-04	1828	1	4079E-03	3	7653E-04	-9	8844E-05
1833	1	1873E-03	4	6202E-04	-8	1468E-05	1832	1	2649E-03	3	8763E-04	-9	2875E-05
			6	3888E-04	-3	5829E-05	1835	9	8356E-04	4	9898E-04	-3	3715E-05

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1843	7 2544E-04	-1 4206E-26	-2 3828E-04	1846	1 6157E-04	-4 1923E-25	-4 2613E-04
1847	3 7447E-04	4 0042E-05	-3 4413E-04	1848	3 9687E-04	-7 7934E-26	-3 5740E-04
1849	0 0000E+00	5 2522E-04	-4 4798E-04	1850	6 3099E-26	5 5320E-27	-4 7418E-04
1851	6 8052E-04	1 5050E-04	-2 2771E-04	1854	1 5694E-04	3 0900E-05	-4 2599E-04
1855	3 4430E-04	9 4759E-05	-4 5533E-04	1856	3 7154E-04	7 9160E-05	-3 5703E-04
1857	0 0000E+00	1 1714E-05	-4 5116E-04	1858	0 0000E+00	9 8775E-06	-4 7311E-04
1859	5 7888E-04	2 5413E-04	-2 1637E-04	1861	1 4003E-04	5 4521E-05	-4 2714E-04
1862	3 3268E-04	1 1931E-04	-3 5535E-04	1863	0 0000E+00	9 8553E-06	-4 7766E-04
1864	7 5132E-04	8 4538E-26	-2 3384E-04	1867	1 6825E-04	-1 5592E-25	-4 6678E-04
1868	3 9422E-04	4 2171E-05	-3 7060E-04	1869	4 1014E-04	-7 7935E-26	-3 8234E-04
1870	0 0000E+00	4 4230E-06	-4 9836E-04	1871	7 9448E-26	2 0118E-27	-5 2400E-04
1872	7 0134E-04	1 5486E-04	-2 2834E-04	1875	1 6471E-04	3 1727E-05	-4 7237E-04
1876	3 6250E-04	1 0199E-04	-3 6982E-04	1877	3 8576E-04	8 4110E-05	-3 8517E-04
1878	0 0000E+00	1 3160E-05	-4 9773E-04	1879	-5 2940E-23	9 4864E-04	-5 2412E-04
1880	5 9949E-04	2 5211E-04	-2 2280E-04	1882	1 4724E-04	5 4451E-05	-4 7391E-04
1883	3 4756E-04	1 2539E-04	-3 8617E-04	1884	0 0000E+00	7 9022E-06	-5 3061E-04
1888	-5 1728E-04	-1 6995E-04	7 7666E-04	1900	4 3521E-04	1 6942E-04	7 5951E-04
1902	1 5509E-04	6 5942E-05	8 1495E-04	1903	-4 8589E-04	-2 3242E-04	7 7674E-04
1904	-5 7141E-04	-2 3464E-04	1 0263E-03	1905	4 2787E-04	2 1907E-04	7 5758E-04
1906	3 7498E-04	1 6911E-04	8 6860E-04	1907	1 7397E-04	1 6941E-21	8 1617E-04
1908	-6 1488E-04	0 0000E+00	1 0256E-03	1909	4 2341E-04	0 0000E+00	8 6788E-04
1911	-6 2908E-04	-2 0406E-04	1 3951E-03	1913	3 1312E-04	1 2889E-04	9 9609E-04
1915	-5 5030E-05	-1 1877E-05	1 1687E-03	1916	-5 9207E-04	-2 9111E-04	1 3963E-03
1917	-6 8586E-04	-2 6755E-04	1 7138E-03	1918	3 2272E-04	1 5659E-04	9 9289E-04
1919	2 3290E-04	1 3624E-04	1 0980E-03	1920	-4 7146E-05	0 0000E+00	1 1652E-03
1921	-7 2516E-04	-6 7763E-21	1 7132E-03	1922	2 9475E-04	0 0000E+00	1 0963E-03
1924	-5 8639E-04	-1 7649E-04	2 1667E-03	1926	-1 1500E-04	-4 9734E-05	2 0362E-03
1927	-5 3352E-04	-2 4129E-04	2 1765E-03	1929	-1 1464E-04	-1 6941E-21	2 0379E-03
1934	1 4669E-04	1 7725E-04	7 0390E-04	1936	1 3229E-04	3 1662E-04	5 7157E-04
1938	4 2917E-04	2 0678E-04	7 3017E-04	1941	7 2661E-05	2 4379E-04	6 3153E-04
1942	1 7473E-04	1 5567E-04	7 1750E-04	1943	1 5788E-04	1 5453E-04	8 1515E-04
1944	3 1663E-04	3 1332E-04	4 8623E-04	1945	2 2206E-04	3 2363E-04	5 6761E-04
1946	4 6782E-04	3 3881E-21	7 3813E-04	1948	2 4857E-04	0 0000E+00	6 0510E-04
1949	2 0378E-04	1 6941E-21	8 1392E-04	1950	5 0640E-04	0 0000E+00	4 8125E-04
1955	1 3546E-04	1 2863E-04	9 2063E-04	1957	1 7252E-04	2 8071E-04	7 1993E-04
1959	4 6615E-04	2 3777E-04	9 3118E-04	1962	2 4437E-05	2 3409E-04	8 0820E-04
1963	1 6645E-04	1 3729E-04	9 3553E-04	1964	9 4043E-05	1 5929E-04	1 0683E-03
1965	3 2143E-04	3 3352E-04	5 7802E-04	1966	2 0416E-04	3 8419E-04	7 2165E-04
1967	5 2288E-04	3 3881E-21	9 3543E-04	1969	2 0437E-04	0 0000E+00	7 5297E-04
1970	1 4413E-04	0 0000E+00	1 0756E-03	1971	5 3244E-04	3 3881E-21	6 5030E-04
1988	4 5103E-04	3 1376E-04	4 6698E-04	1990	6 0541E-04	5 6732E-04	2 7801E-04
1992	3 6470E-04	4 0186E-04	4 3278E-04	1995	5 8316E-04	5 4849E-04	2 8866E-04
1996	5 6599E-04	4 1500E-04	3 3411E-04	1997	4 9650E-04	4 5247E-04	3 6783E-04
1998	7 3330E-04	5 3701E-04	2 2239E-04	1999	7 0283E-04	6 5816E-04	2 2808E-04
2000	6 2670E-04	0 0000E+00	3 8259E-04	2003	8 4221E-04	-6 7763E-21	2 6423E-04
2003	7 8365E-04	0 0000E+00	3 3009E-04	2004	9 4790E-04	0 0000E+00	2 3365E-04



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2009	4 2912E-04	3 8185E-04	4 4081E-04	2011	6 9277E-04	6 8625E-04	2 7331E-04
2013	3 7658E-04	4 1713E-04	5 1277E-04	2016	6 1548E-04	6 3616E-04	3 3351E-04
2017	5 9481E-04	5 0781E-04	3 9277E-04	2018	4 9968E-04	5 8704E-04	4 9946E-04
2019	7 8933E-04	6 1769E-04	2 7131E-04	2020	7 7026E-04	8 0336E-04	3 2293E-04
2021	6 6998E-04	0 0000E+00	4 4194E-04	2023	9 3626E-04	0 0000E+00	3 0580E-04
2024	8 6333E-04	0 0000E+00	4 5261E-04	2025	1 0310E-03	-6 7763E-21	3 3043E-04
2042	8 7198E-04	6 4877E-04	1 6224E-04	2044	9 5542E-04	5 6012E-04	6 4527E-05
2046	7 5894E-04	6 4976E-04	1 7379E-04	2049	8 4185E-04	6 8948E-04	8 7718E-05
2050	7 7762E-04	5 4377E-04	1 3338E-04	2051	8 4624E-04	6 9151E-04	1 4106E-04
2052	7 6010E-04	5 0994E-04	5 0041E-05	2053	8 7638E-04	6 3940E-04	4 9910E-05
2054	9 2485E-04	0 0000E+00	6 3900E-04	2056	8 6597E-04	-6 7763E-21	7 0706E-05
2057	9 5527E-04	0 0000E+00	1 4232E-04	2058	8 5376E-04	0 0000E+00	4 7787E-05
2063	9 2146E-04	7 9326E-04	9 5138E-05	2065	9 1740E-04	7 2551E-04	3 8966E-05
2067	8 1353E-04	7 8297E-04	2 2206E-04	2070	9 0015E-04	7 4400E-04	1 2534E-04
2071	8 4465E-04	6 0787E-04	1 7939E-04	2072	9 0015E-04	8 1974E-04	2 1428E-04
2073	7 9406E-04	5 5119E-04	8 4645E-05	2074	9 6056E-04	7 4666E-04	1 0935E-04
2075	1 0098E-03	0 0000E+00	2 1612E-04	2077	9 3429E-04	-6 7763E-21	1 2036E-04
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2095	7 8516E-04	4 5423E-04	-5 5597E-05	2097	7 7473E-04	5 1984E-04	1 1471E-05
2100	6 6821E-04	4 1334E-04	-2 9283E-05	2101	7 2579E-04	4 1730E-04	-3 3443E-05
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2113	7 0600E-04	4 4036E-04	-4 2536E-06	2114	7 6257E-04	5 0866E-04	-1 6473E-06
2115	8 5747E-04	6 7763E-21	2 5706E-05	2117	8 2361E-04	6 7763E-21	2 3755E-05
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2137	2 7222E-04	1 4884E-04	-3 4361E-04	2138	2 8795E-04	1 4776E-04	-3 6075E-04
2139	-5 2940E-23	5 4021E-06	-4 5517E-04	2140	-5 2940E-23	9 4668E-06	-4 8191E-04
2141	5 3040E-04	3 3881E-21	-2 0168E-04	2143	1 3764E-04	8 4703E-22	-4 2988E-04
2144	3 1035E-04	3 3881E-21	-3 5887E-04	2145	6 0767E-26	8 7509E-27	-4 8139E-04
2150	3 1841E-04	1 4238E-04	-3 7839E-04	2152	-5 2940E-23	9 9979E-06	-5 0389E-04
2154	5 1086E-04	2 6477E-04	-2 0989E-04	2157	1 3357E-04	6 6715E-05	-4 7533E-04
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2165	3 2447E-04	0 0000E+00	-3 9429E-04	2166	6 2065E-26	1 2331E-26	-5 3598E-04
2179	2 7561E-04	-4 0548E-25	-7 4096E-04	2180	-3 9466E-04	-2 1849E-05	-7 4835E-04
2181	-3 4830E-04	1 5320E-24	-4 7126E-04	2182	4 9435E-04	3 4447E-05	-7 4082E-04
2183	5 2576E-04	7 7259E-25	-4 7199E-04	2184	2 7915E-04	4 3919E-05	-4 7186E-04
2187	-3 8482E-04	-6 7682E-05	-7 4883E-04	2186	-3 4501E-04	-4 1048E-05	-4 7226E-04
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2191	5 2796E-04	1 5690E-04	-4 7199E-04	2192	3 4414E-04	6 2318E-26	3 0671E-05
2193	-3 2381E-04	-1 7350E-05	-2 1108E-04	2194	-2 9481E-04	1 5512E-24	3 9817E-05
2195	5 5563E-04	4 4582E-05	-2 0759E-04	2196	5 8140E-04	8 0236E-25	-2 1112E-04
2197	3 4300E-04	4 9041E-05	-2 0773E-04	2198	-3 1414E-04	-5 7852E-05	

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2199	-2 9013E-04	-3 3414E-05	3 1438E-05	2200	5 5448E-04	1 2843E-04	-2 0861E-04
2201	5 7797E-04	9 0132E-05	4 0489E-05	2202	3 3887E-04	1 0071E-04	-2 0783E-04
2203	-2 7940E-04	-6 8769E-05	3 2103E-05	2204	5 7648E-04	1 6874E-04	3 8323E-05
2205	3 7969E-04	8 2811E-26	2 6715E-04	2206	-2 9620E-04	-1 6703E-05	2 4891E-04
2207	-3 3886E-04	1 5379E-24	4 5214E-04	2208	5 9515E-04	4 3068E-05	2 8288E-04
2209	5 4677E-04	7 9147E-25	5 1027E-04	2210	3 7886E-04	5 4945E-05	2 6736E-04
2211	-2 8954E-04	-5 3339E-05	2 4917E-04	2212	-3 3368E-04	-3 8517E-05	4 5111E-04
2213	5 9242E-04	1 3266E-04	2 8374E-04	2214	5 4521E-04	9 0004E-05	5 0882E-04
2215	3 7522E-04	1 0813E-04	2 6673E-04	2216	-3 2072E-04	-8 0459E-05	4 5081E-04
2217	5 4364E-04	1 6067E-04	5 1251E-04	2218	4 1644E-04	2 3298E-25	-7 4935E-04
2219	-2 5071E-04	1 7076E-25	-6 9348E-04	2220	1 0443E-04	6 1334E-05	-7 4022E-04
2221	1 5335E-04	3 7411E-25	-4 6419E-04	2222	-2 0946E-04	1 0998E-05	-7 0333E-04
2223	-2 7767E-04	-1 6837E-25	-7 4218E-04	2224	3 9449E-04	9 1991E-05	-7 4770E-04
2225	-1 4632E-04	1 3393E-04	-4 7017E-04	2226	-1 1950E-04	8 5146E-05	-7 6144E-04
2227	1 2048E-04	1 0430E-04	-4 8990E-04	2228	3 5385E-04	1 4620E-04	-7 5482E-04
2229	-2 1590E-04	1 8995E-04	-4 8990E-04	2230	2 8773E-05	1 7713E-04	-4 8386E-04
2231	-1 3422E-04	1 4278E-04	-7 6563E-04	2232	4 7231E-04	3 8730E-25	-2 1191E-04
2233	-1 1423E-04	3 3445E-04	-4 4949E-04	2234	4 7231E-04	3 8730E-25	-2 1191E-04
2235	1 2273E-04	3 9172E-25	-2 0933E-04	2236	-2 2977E-04	1 3638E-04	-2 0917E-04
2237	1 9794E-04	4 4003E-25	3 2873E-05	2238	4 5866E-05	8 9310E-05	-2 1473E-04
2239	-2 3055E-04	-7 5683E-26	-2 8070E-05	2240	9 6941E-05	1 5535E-04	-2 1534E-04
2241	1 4951E-04	1 7031E-04	-2 1095E-04	2242	-1 6622E-04	3 4224E-04	-2 0208E-04
2243	1 5906E-04	1 1740E-04	3 2426E-05	2244	4 0435E-04	1 5537E-04	-2 1635E-04
2245	-1 9048E-04	2 5409E-04	-2 0518E-05	2246	6 9542E-05	1 8628E-04	3 1071E-05
2247	-1 6443E-04	2 9915E-04	-2 1725E-04	2248	5 1217E-04	4 4882E-25	2 7799E-04
2249	-6 3944E-05	4 4289E-04	2 6512E-05	2250	2 0509E-04	6 1954E-05	2 6202E-04
2251	-9 2966E-05	4 6147E-25	2 5906E-04	2252	-1 8448E-04	1 3177E-04	2 4956E-04
2253	2 3099E-04	4 6904E-25	4 7726E-04	2254	4 9370E-04	9 1558E-05	2 7653E-04
2255	-1 1183E-04	2 9820E-27	2 6257E-04	2256	1 4102E-04	1 5663E-04	2 6080E-04
2257	-1 1400E-04	1 8820E-04	2 6257E-04	2258	-1 1322E-04	3 5014E-04	2 4007E-04
2259	1 9839E-04	1 1512E-04	4 8250E-04	2260	4 3954E-04	1 5712E-04	2 7648E-04
2261	-9 3411E-05	2 3978E-04	2 5167E-04	2262	1 1206E-04	1 7986E-04	4 8008E-04
2263	-1 1214E-04	3 0524E-04	4 1583E-04	2264	6 2453E-05	8 3380E-06	-6 7517E-04
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2273	6 8104E-04	-2 1599E-24	-2 1167E-04	2274	5 9861E-04	-1 3185E-04	-2 1208E-04
2275	2 8063E-06	8 7558E-05	-2 0397E-05	2276	-4 0070E-05	1 0841E-25	-2 4362E-04
2277	6 4351E-04	-6 9281E-05	-2 1293E-05	2278	1 5238E-04	3 5120E-04	2 0017E-04
2279	6 8650E-04	1 7565E-24	-8 9337E-06	2280	-2 3691E-04	-2 3691E-04	3 2630E-04
2281	-1 1972E-04	-1 1972E-04	1 7707E-04	2282	6 9090E-04	-6 9578E-05	1 6485E-04
2283	1 5726E-05	1 5726E-05	2 1621E-04	2284	1 0805E-05	-6 1592E-26	2 1205E-04
2285	7 1185E-04	-1 5090E-04	3 5054E-04	2286	1 8833E-04	3 8230E-04	-3 8711E-04
2287	7 8276E-04	1 7475E-24	4 0620E-04				

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2347	3 3776E-04	-3 5126E-04	-4 3778E-04	2348	2 9423E-04	-2 4724E-04	-2 0665E-04
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2351	1 0931E-04	1 9622E-04	-5 3670E-04	2352	5 2876E-04	-4 6040E-04	-5 5383E-04
2353	4 3921E-04	-3 0932E-04	-3 1448E-04	2354	-6 0074E-05	2 8346E-04	-6 4171E-04
2355	6 0292E-05	5 2768E-04	-3 4191E-04	2359	3 5764E-04	5 0493E-04	-6 8251E-05
2360	4 3150E-04	-2 0803E-04	-9 8404E-05	2361	4 5077E-04	-1 5749E-04	3 9010E-05
2362	2 4502E-04	6 5039E-04	-1 0443E-04	2363	4 4984E-04	7 7724E-04	5 3855E-05
2364	2 1384E-04	3 8425E-04	-1 3051E-04	2365	5 2202E-04	-1 7053E-04	-1 5568E-04
2366	5 3716E-04	-2 1518E-04	1 3343E-05	2367	9 9522E-04	4 8484E-04	-1 6806E-04
2368	1 7809E-04	6 4369E-04	3 9720E-05	2372	4 9267E-04	5 1715E-04	1 5430E-04
2373	5 4956E-04	-1 2171E-04	1 4298E-04	2374	5 8551E-04	-3 0224E-04	1 5457E-04
2375	3 6874E-04	6 9435E-04	1 9009E-04	2376	5 7504E-04	6 9043E-04	2 8768E-04
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2393	-8 9901E-05	-1 6843E-04	-1 8387E-04	2394	-7 1392E-05	-9 8834E-05	-1 8497E-05
2395	4 1176E-04	6 5115E-04	-2 6144E-04	2396	6 0937E-04	6 3614E-04	-5 9321E-05
2397	2 5937E-04	3 9795E-04	-2 5972E-04	2398	1 0865E-04	-2 8191E-04	-3 0406E-04
2399	1 2572E-04	-1 7200E-04	-1 0210E-04	2400	2 8431E-04	6 6536E-04	-3 5104E-04
2401	4 5034E-04	7 2592E-04	-1 4184E-04	2405	6 5190E-04	4 6594E-04	2 5262E-05
2406	1 9564E-04	-6 1842E-05	5 0717E-05	2407	2 8822E-04	-2 5070E-05	7 9532E-05
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2412	3 6455E-04	-1 1193E-04	5 6412E-05	2413	4 7981E-04	7 7588E-04	-4 5112E-05
2414	6 9650E-04	8 0087E-04	4 6897E-05	2418	8 7386E-04	4 7424E-04	8 3488E-05
2419	4 0844E-04	-4 2393E-05	8 8924E-05	2420	3 8637E-04	-2 2791E-04	5 0085E-05
2421	8 9449E-04	7 6194E-04	1 0135E-04	2422	1 0710E-03	5 7222E-04	1 1781E-04
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2439	-4 0467E-04	-8 0156E-05	-5 1443E-05	2440	-2 2390E-04	1 2272E-04	9 2274E-05
2441	2 5093E-04	8 0972E-05	-6 8834E-05	2442	4 7411E-04	-4 5237E-05	3 0902E-05
2443	7 9013E-05	1 6560E-05	-1 3149E-04	2444	-2 6305E-04	-1 5845E-04	-1 0903E-04
2445	-2 0724E-04	-1 8779E-05	7 2304E-05	2446	4 0522E-04	4 1167E-04	-1 9144E-04
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2454	8 8003E-04	1 6331E-04	6 2198E-06	2455	1 0704E-03	1 1085E-05	4 1743E-05
2456	5 9966E-04	1 8447E-04	6 2744E-05	2457	1 0431E-04	-3 6290E-05	1 0123E-04
2458	2 3063E-04	4 9195E-06	8 4985E-05	2459	8 7018E-04	5 1692E-04	-7 7692E-06
2460	1 0438E-03	3 4206E-04	3 4511E-05	2464	9 1256E-04	2 1131E-06	4 7314E-05
2465	2 8882E-04	-1 8362E-05	6 3065E-05	2466	3 3953E-04	1 6321E-04	5 4393E-05
2467	1 2042E-03	1 8312E-04	4 0846E-05	2468	1 2730E-03	3 8556E-05	4 8994E-05
2469	9 0432E-04	2 2740E-04	5 7554E-05	2470	3 3112E-04	-2 6547E-05	6 7310E-05
2471	3 5243E-04	-9 4879E-05	5 4826E-05	2472	1 1056E-03	5 0773E-04	6 4296E-05
2473	1 2083E-03	2 9256E-04	5 8138E-05	2484	3 9888E-04	-3 9141E-05	-1 3353E-04
2487	0 0000E+00	1 2116E-04	-2 1630E-05	2488	5 7374E-04	4 1812E-05	-7 6120E-05

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2489	4 0809E-04	2 6314E-04	2492	0 0000E+00	2 5217E-04	-4 5511E-25	
2493	4 9792E-04	2 3729E-04	2494	2 7943E-04	4 9061E-04	-1 8676E-04	
2496	3 6734E-04	3 1481E-04	2497	1 0466E-03	1 8345E-25	-6 2342E-06	
2500	8 1488E-04	1 3832E-04	2501	9 8272E-04	3 7147E-25	-7 6753E-05	
2502	9 7355E-04	3 5544E-04	2505	6 6938E-04	3 3203E-04	-7 9495E-05	
2506	8 8368E-04	2 8030E-04	2507	7 3751E-04	5 7076E-04	-2 1724E-05	
2509	6 9358E-04	3 8797E-04	2510	1 2716E-03	2 7382E-25	-2 6957E-05	
2513	1 0359E-03	1 5561E-04	2514	1 1419E-03	3 2906E-25	-1 0463E-04	
2515	1 1951E-03	3 6142E-04	2518	8 5832E-04	3 7626E-04	-7 6660E-05	
2519	1 0270E-03	3 0320E-04	2520	9 4304E-04	5 5860E-04	8 0300E-06	
2522	8 1908E-04	4 0333E-04	2530	1 9163E-04	3 6356E-25	7 2572E-26	
2533	1 0197E-04	7 0973E-26	2534	2 0883E-04	2 3984E-05	-7 5137E-25	
2535	1 8600E-04	-1 6819E-25	2536	-1 3235E-23	8 4327E-06	2 3992E-25	
2537	1 4639E-25	5 5344E-26	2538	1 9298E-04	6 8591E-05	-6 8279E-25	
2541	9 8097E-05	2 2339E-05	2542	1 9268E-04	6 6293E-05	-7 3292E-25	
2543	1 7857E-04	5 2319E-05	2544	-5 2940E-23	1 6118E-05	2 3871E-25	
2545	2 6470E-23	8 9404E-06	2546	1 8350E-04	1 1363E-04	-6 4997E-25	
2548	8 8966E-05	3 9531E-05	2549	1 6611E-04	7 7973E-05	-7 4472E-05	
2550	5 2940E-23	1 0236E-05	2551	4 0010E-04	1 6092E-25	-1 6326E-04	
2554	1 1531E-04	-3 4044E-25	2553	2 5430E-04	2 8179E-05	-1 3539E-04	
2556	2 8772E-04	-1 9309E-25	2557	-6 6174E-24	5 2020E-06	-1 6217E-04	
2558	1 2997E-25	4 4109E-26	2559	3 8153E-04	1 0322E-04	-1 5497E-04	
2562	1 1093E-04	2 5091E-05	2563	2 3683E-04	6 8970E-05	-1 6243E-04	
2564	2 7151E-04	6 1149E-05	2565	0 0000E+00	1 2633E-05	-1 4123E-04	
2566	0 0000E+00	1 0079E-05	2567	3 3887E-04	1 7074E-04	-2 0502E-04	
2569	9 7845E-05	4 3104E-05	2570	2 4355E-04	9 5016E-05	-2 0303E-04	
2571	0 0000E+00	1 1707E-05	2572	6 0347E-04	1 6626E-25	-2 6940E-04	
2575	1 3875E-04	-3 6695E-25	2576	3 1364E-04	3 4552E-05	-3 2188E-04	
2577	3 6015E-04	-2 0387E-25	2578	6 6174E-24	6 0057E-06	-1 9882E-04	
2579	1 6050E-25	3 0157E-26	2580	5 6865E-04	1 2800E-04	-2 6410E-04	
2583	1 3383E-04	2 8540E-05	2584	2 8866E-04	8 5315E-05	-3 0632E-04	
2585	3 3867E-04	7 4431E-05	2586	0 0000E+00	1 5265E-05	-3 1994E-04	
2587	0 0000E+00	1 0413E-05	2588	4 9290E-04	2 1449E-04	-1 8499E-04	
2590	1 1632E-04	4 7835E-05	2591	3 0196E-04	1 1522E-04	-3 0632E-04	
2592	0 0000E+00	9 3189E-06	2606	-3 6289E-04	-1 1532E-04	-7 5006E-04	
2608	4 8677E-04	1 8759E-04	2610	2 7481E-04	1 2064E-04	-7 4045E-04	
2611	-3 3960E-04	-1 6426E-04	2612	-3 1344E-04	-1 2390E-04	-4 7248E-04	
2613	4 7450E-04	2 4132E-04	2614	5 0912E-04	2 2985E-04	-4 7273E-04	
2615	3 0380E-04	0 0000E+00	2616	-3 3355E-04	0 0000E+00	-4 7250E-04	
2617	5 6729E-04	-6 7763E-21	2619	3 0117E-04	-9 7326E-05	-2 1154E-04	
2621	5 4409E-04	2 0425E-04	2623	3 3193E-04	1 4157E-04	-2 0833E-04	
2624	-2 8141E-04	-1 3351E-04	2625	-2 6568E-04	-1 0292E-04	3 1808E-05	
2626	5 2731E-04	2 6910E-04	2627	5 5446E-04	-4 781E-04	3 7994E-05	
2628	3 6441E-04	0 0000E+00	2629	-2 7963E-04	-1 6741E-21	3 1950E-05	
2630	6 1958E-04	0 0000E+00	2632	-2 7629E-04	-8 7963E-05	2 4894E-05	
2634	5 8092E-04	2 1396E-04	2636	3 6609E-04	1 5557E-04	2 6683E-04	

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STEP	2	INCREMENT	1
2637	-2 5792E-04	-1 2246E-04	2 4949E-04
2639	5 6168E-04	2 8342E-04	2 8214E-04
2641	4 0138E-04	-3 3881E-21	2 6606E-04
2643	5 8261E-04	5 7763E-21	5 1460E-04
2645	-1 0718E-04	2 4894E-04	-6 8381E-04
2647	-6 0304E-05	1 2872E-04	-7 4162E-04
2649	7 9305E-05	1 5348E-04	-4 9367E-04
2651	-1 6271E-05	3 3320E-04	-4 1678E-04
2653	3 2604E-05	0 0000E+00	-7 1678E-04
2655	2 3455E-04	0 0000E+00	-3 9388E-04
2657	-5 2058E-05	4 4055E-04	-1 8721E-04
2659	-2 5374E-05	2 4403E-04	-2 1803E-04
2661	1 1297E-04	1 7785E-04	2 7762E-05
2663	8 2720E-05	4 2573E-04	3 6736E-05
2665	1 4536E-04	1 6941E-21	-2 1021E-04
2667	3 8901E-04	0 0000E+00	3 9649E-05
2669	2 9011E-05	4 8846E-04	2 3081E-04
2671	4 0745E-05	2 7637E-04	2 4730E-04
2673	1 5271E-04	1 8052E-04	4 8642E-04
2675	1 7626E-04	4 2933E-04	3 9329E-04
2677	2 3179E-04	1 6941E-21	2 4475E-04
2679	4 7532E-04	3 3881E-21	3 6507E-04
2681	2 0152E-04	6 2155E-04	-4 0595E-04
2683	1 9542E-04	4 4790E-04	-4 6534E-04
2685	1 9107E-04	4 5222E-04	-3 2056E-04
2687	3 3055E-04	5 4678E-04	-2 3943E-04
2689	4 0314E-04	0 0000E+00	-4 2831E-04
2691	5 4624E-04	0 0000E+00	-2 2599E-04
2693	3 8799E-04	7 4602E-04	-8 0669E-05
2695	3 6496E-04	5 7647E-04	-1 0868E-04
2697	3 3250E-04	5 4383E-04	5 1804E-05
2699	5 3072E-04	6 2522E-04	4 4513E-05
2701	6 0995E-04	0 0000E+00	-9 0055E-05
2703	7 4304E-04	0 0000E+00	3 0253E-05
2705	5 4580E-04	7 6638E-04	1 4481E-04
2707	4 9964E-04	6 3251E-04	1 7538E-04
2709	4 2942E-04	4 9330E-04	3 3461E-04
2711	6 2199E-04	5 8339E-04	2 3606E-04
2713	7 5099E-04	0 0000E+00	1 5907E-04
2715	8 3554E-04	6 7763E-21	1 7167E-04
2717	3 7781E-04	6 3277E-04	-2 7400E-04
2719	3 1727E-04	4 9835E-04	-3 2682E-04
2721	4 0122E-04	5 5675E-04	-1 8783E-04
2723	4 0335E-04	5 1970E-04	-1 2777E-04
2725	3 6314E-04	0 0000E+00	-3 1111E-04
2727	4 3058E-04	3 3881E-21	-1 1975E-04
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2828	7.0392E-04	7.2430E-04	-5.5439E-05	4.9325E-04	6.1277E-04	-6.9075E-05
2833	5.5625E-04	6.0112E-04	-6.2742E-05	5.2834	4.4388E-04	-6.7052E-05
2835	6.1950E-04	6.2799E-04	2.9219E-05	5.1209E-04	4.1429E-04	-8.0497E-05
2837	6.4462E-04	5.9052E-04	3.3198E-06	6.5085E-04	6.7763E-21	-6.9412E-05
2840	6.2302E-04	6.7763E-21	-6.6480E-05	2841	-1.3553E-20	1.9249E-06
2842	6.7367E-04	-6.7763E-21	-2.7779E-05	2847	7.7460E-04	1.2207E-04
2849	8.8997E-04	7.0893E-04	7.7920E-05	2851	6.4116E-04	1.1618E-04
2854	7.0872E-04	6.3017E-04	6.7012E-05	2855	6.6692E-04	8.2171E-05
2856	7.4161E-04	5.8437E-04	1.4373E-04	2857	6.4435E-04	2.4407E-05
2858	7.6266E-04	5.4697E-04	7.1799E-05	2859	7.9611E-04	1.0278E-04
2861	7.5873E-04	0.0000E+00	3.5306E-05	2862	8.5209E-04	8.1723E-05
2863	7.8333E-04	-6.7763E-21	-4.4191E-06	2879	0.0000E+00	-6.7225E-25
2881	1.1932E-04	2.9261E-04	-2.1053E-04	2884	-8.4703E-22	-7.9871E-25
2885	2.7453E-04	2.8279E-04	-6.3887E-05	2886	1.6357E-04	-1.7766E-04
2888	3.2941E-04	-3.3881E-21	-6.7707E-05	2892	5.0215E-04	-7.9015E-05
2894	4.9299E-04	4.2293E-04	-4.7588E-05	2897	4.3285E-04	-7.8300E-05
2898	5.4530E-04	3.7652E-04	-6.9491E-05	2899	5.4919E-04	-5.8997E-05
2901	5.9263E-04	0.0000E+00	-6.7740E-05	2905	6.5704E-04	-6.5039E-05
2907	6.5629E-04	4.8145E-04	-1.6019E-05	2910	5.6925E-04	-5.5084E-05
2911	6.5518E-04	4.2293E-04	-5.3621E-05	2912	7.0009E-04	-2.8945E-05
2914	7.1154E-04	0.0000E+00	-4.3521E-05	2926	1.7018E-04	-7.0716E-25
2928	5.2940E-23	1.2265E-05	2.3811E-25	2930	1.7480E-04	-6.0040E-25
2933	8.2043E-05	4.5191E-05	-6.5597E-25	2934	1.5873E-04	-6.9188E-25
2935	1.5037E-04	8.9797E-05	-7.1678E-25	2936	-5.2940E-23	2.3843E-25
2937	5.2940E-23	9.7097E-06	-7.9413E-05	2938	2.0855E-04	1.2697E-25
2940	9.0439E-05	8.4703E-22	2.3861E-25	2941	1.6916E-04	-6.9877E-05
2942	1.2019E-25	-1.3290E-26	-8.0012E-05	2947	2.1205E-04	-1.3287E-05
2949	-5.2940E-23	1.0136E-05	-1.6155E-04	2951	2.9574E-04	-1.2860E-04
2954	8.9735E-05	4.9218E-05	-1.5852E-04	2955	1.9145E-04	-1.3230E-04
2956	2.1466E-04	1.1424E-04	-2.0032E-04	2957	5.2940E-23	-1.6080E-04
2958	5.2940E-23	9.7637E-06	-2.3804E-04	2959	3.2936E-04	-1.2267E-04
2961	1.0008E-04	0.0000E+00	-1.5748E-04	2962	2.3508E-04	-1.9865E-04
2963	1.1771E-25	-3.9317E-27	-3.3735E-04	2968	2.5530E-04	-2.5832E-04
2970	0.0000E+00	1.2786E-05	-3.1802E-04	2972	4.1971E-04	-1.7294E-04
2975	1.0768E-04	5.6660E-05	-2.9635E-04	2976	2.2998E-04	-2.5458E-04
2977	2.6237E-04	1.3645E-04	-3.0044E-04	2978	0.0000E+00	-3.1641E-04
2979	-5.2940E-23	1.0288E-05	-3.8565E-04	2980	4.5452E-04	-1.7072E-04
2982	1.1814E-04	0.0000E+00	-2.9591E-04	2983	2.8385E-04	-2.9983E-04
2984	1.4150E-25	1.0232E-26	-3.8642E-04	2997	-1.3845E-24	-3.7373E-03
2998	-7.0012E-04	-3.8256E-05	-3.9618E-03	2999	-8.4360E-04	-2.4289E-03
3000	1.4552E-04	9.1581E-06	-3.4024E-03	3001	-1.0884E-05	-2.1945E-03
3002	-1.2627E-04	-3.8541E-06	-3.7343E-03	3003	-6.8242E-04	-3.9611E-03
3004	-8.5939E-04	-1.0637E-04	-2.4297E-03	3005	1.5117E-04	-3.4010E-03
3006	-3.8896E-04	7.4650E-06	-2.1917E-03	3007	-1.0697E-04	-3.7333E-03
3008	-8.1130E-04	-1.9673E-04	-2.4293E-03	3009	1.4288E-05	-2.1835E-03
3010	1.1420E-04	-1.3392E-25	-1.4265E-03	3011	-5.5895E-04	-1.5682E-03

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STEP	2	INCREMENT
3012	-4 3183E-04	1 9958E-24
3014	-4 1959E-04	9 6908E-25
3016	-5 4658E-04	-9 6732E-05
3018	3 4366E-04	8 9529E-05
3020	1 3172E-04	4 1079E-05
3022	4 2884E-04	1 4944E-04
3033	-1 9212E-04	1 4151E-24
3035	-1 6108E-05	3 0745E-25
3037	-2 8971E-04	-2 2110E-25
3041	1 4786E-04	3 7104E-05
3043	4 3742E-05	2 0062E-05
3045	1 7864E-04	-3 6552E-04
3048	1 8415E-04	-9 0470E-05
3050	1 0366E-04	-2 5936E-04
3054	-4 3972E-04	-1 1258E-25
3056	4 3791E-05	4 2537E-25
3058	-4 4948E-04	-3 8678E-25
3062	-1 3396E-04	7 6639E-05
3064	5 3284E-05	8 9508E-05
3066	-6 9499E-05	-1 7807E-04
3069	-9 8205E-05	-3 9963E-05
3071	-1 0878E-04	-1 2014E-05
3085	9 6964E-04	-1 1669E-03
3089	5 9105E-04	-9 7366E-04
3091	7 1035E-04	-9 4606E-04
3095	-2 0788E-04	-3 1242E-03
3098	6 0416E-04	-1 0302E-03
3102	1 2861E-04	-7 6869E-04
3104	6 9011E-04	-8 8487E-04
3108	-5 8570E-05	-2 6298E-03
3118	3 0236E-04	-8 4025E-04
3120	1 3224E-04	4 8774E-05
3122	2 2643E-04	-2 5701E-04
3124	3 7791E-04	-9 4908E-04
3126	1 0316E-05	-1 2397E-04
3131	1 9687E-04	-6 3002E-04
3133	-5 5279E-05	2 9297E-04
3135	-1 2315E-05	-4 6938E-05
3137	4 2497E-04	-6 1335E-04
3139	-5 9536E-05	2 7313E-04
3151	-5 5968E-04	-1 2090E-03
3153	-1 5945E-04	-3 7233E-04
3155	-4 1468E-05	-5 9637E-04
3157	-4 9308E-04	-1 0058E-03
3159	-1 0010E-04	-2 1732E-04
3164	-1 8868E-04	-5 8534E-04
3013	-1 1352E-03	-1 1352E-03
3015	-1 1441E-03	-1 1441E-03
3017	-1 5678E-03	-1 5678E-03
3019	-1 6272E-03	-1 6272E-03
3021	-1 6258E-03	-1 6258E-03
3030	-1 1492E-03	-1 1492E-03
3034	-3 1189E-03	-3 1189E-03
3036	-1 8781E-03	-1 8781E-03
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3051	-1 4823E-03	-1 4823E-03
3055	-1 1126E-03	-1 1126E-03
3059	-1 0367E-03	-1 0367E-03
3063	-1 4690E-03	-1 4690E-03
3065	-1 1185E-03	-1 1185E-03
3067	-1 0803E-03	-1 0803E-03
3070	-1 4235E-03	-1 4235E-03
3084	-9 9212E-04	-9 9212E-04
3086	-3 1902E-03	-3 1902E-03
3090	-3 0247E-03	-3 0247E-03
3094	-2 1076E-03	-2 1076E-03
3097	-2 0868E-03	-2 0868E-03
3099	-1 3581E-03	-1 3581E-03
3103	-1 4071E-03	-1 4071E-03
3107	-9 6186E-04	-9 6186E-04
3117	-9 4369E-04	-9 4369E-04
3119	-3 2579E-03	-3 2579E-03
3121	-2 6853E-03	-2 6853E-03
3123	-3 1336E-03	-3 1336E-03
3125	-1 8516E-03	-1 8516E-03
3130	-1 6521E-03	-1 6521E-03
3132	-9 9014E-04	-9 9014E-04
3134	-1 0441E-03	-1 0441E-03
3136	-1 1450E-03	-1 1450E-03
3138	-8 0285E-04	-8 0285E-04
3150	-8 2819E-04	-8 2819E-04
3152	-2 4517E-03	-2 4517E-03
3154	-2 0087E-03	-2 0087E-03
3156	-2 5980E-03	-2 5980E-03
3158	-1 2536E-03	-1 2536E-03
3163	-1 1201E-03	-1 1201E-03
3165	-6 8576E-04	-6 8576E-04
2 1117E-05	2 1117E-05	-1 6285E-03
2 5316E-05	2 5316E-05	-1 6266E-03
-5 2975E-05	-5 2975E-05	-1 1357E-03
6 8389E-05	6 8389E-05	-1 1455E-03
-9 4058E-05	-9 4058E-05	-1 1345E-03
1 4943E-24	1 4943E-24	-3 1103E-03
7 3886E-05	7 3886E-05	-3 0062E-03
-1 7374E-04	-1 7374E-04	-3 1731E-03
1 0384E-04	1 0384E-04	-3 0691E-03
1 2156E-04	1 2156E-04	-2 8836E-03
-2 8705E-04	-2 8705E-04	-2 9634E-03
1 4342E-04	1 4342E-04	-2 9504E-03
5 0107E-05	5 0107E-05	-1 7368E-03
6 3044E-26	6 3044E-26	-1 5846E-03
5 8411E-05	5 8411E-05	-1 5216E-03
-1 1471E-04	-1 1471E-04	-1 4613E-03
8 3426E-05	8 3426E-05	-1 5738E-03
1 0654E-04	1 0654E-04	-1 4940E-03
-1 8123E-04	-1 8123E-04	-1 3947E-03
1 1780E-04	1 1780E-04	-1 5478E-03
1 3795E-04	1 3795E-04	-1 1120E-03
-4 6772E-04	-4 6772E-04	-3 2558E-03
-9 1194E-04	-9 1194E-04	-1 9581E-03
-7 4602E-04	-7 4602E-04	-3 0679E-03
3 3049E-24	3 3049E-24	-3 7299E-03
-3 1433E-04	-3 1433E-04	-1 3124E-03
-7 8059E-04	-7 8059E-04	-9 8723E-04
5 7079E-04	5 7079E-04	-1 5162E-03
2 0742E-24	2 0742E-24	-1 4374E-03
-2 8036E-04	-2 8036E-04	-2 8881E-03
-1 0015E-03	-1 0015E-03	-1 5805E-03
8 4253E-05	8 4253E-05	-1 3638E-03
-7 7578E-04	-7 7578E-04	-3 4127E-03
-7 9740E-04	-7 9740E-04	-2 8870E-03
1 0078E-04	1 0078E-04	-9 3924E-04
-4 2824E-04	-4 2824E-04	-6 2052E-04
5 1911E-04	5 1911E-04	-6 5983E-04
-7 3297E-04	-7 3297E-04	-1 2136E-03
5 5679E-05	5 5679E-05	-1 2571E-03
-8 1793E-04	-8 1793E-04	-2 0596E-03
-1 0303E-03	-1 0303E-03	-9 3092E-04
-2 3465E-04	-2 3465E-04	-9 4070E-04
-9 9594E-04	-9 9594E-04	-2 9135E-03
-1 2614E-04	-1 2614E-04	-2 4845E-03
1 2779E-04	1 2779E-04	-9 9669E-05
-2 0237E-04	-2 0237E-04	-8 0344E-04
-3 9947E-04	-3 9947E-04	-4 0948E-04



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3166	2	5048E-04	2	7806E-04	3167	3	5409E-04	4	5322E-04	-4	8667E-04
3168	1	2801E-04	3	5021E-05	3169	-5	1875E-05	-6	2245E-04	-7	5357E-04
3170	-7	8987E-05	-3	3899E-04	3171	1	4155E-04	3	6252E-04	-8	7120E-04
3172	2	2344E-04	5	2534E-04	3183	-1	1766E-03	-4	7632E-04	-1	7695E-03
3184	-2	7481E-05	-2	9038E-03	3185	-1	1132E-03	-4	5755E-04	-1	5258E-03
3186	-4	5476E-05	-2	7292E-03	3187	-1	1029E-03	-1	1146E-03	-1	5608E-03
3188	-9	4186E-04	-1	2071E-03	3189	-6	8921E-04	-1	3320E-03	-9	1087E-04
3190	-5	6280E-04	-6	7363E-04	3191	-2	7993E-04	-8	8638E-04	-1	0418E-03
3195	-1	8745E-04	6	0427E-25	3196	-5	2194E-04	-4	2402E-04	-8	0003E-04
3197	-6	2924E-04	1	2136E-24	3198	-1	5729E-04	-2	0733E-04	-8	3694E-04
3199	-1	4267E-04	1	7359E-24	3200	-1	9009E-04	-5	9607E-04	-8	5191E-04
3201	-3	3643E-04	-6	7922E-04	3202	-5	9299E-04	-2	2462E-05	-3	2929E-04
3203	1	7417E-04	-9	0976E-05	3204	1	4353E-04	1	7266E-04	-3	4947E-04
3215	-7	6688E-05	1	8900E-24	3218	0	0000E+00	-1	9954E-04	-1	9177E-03
3219	-2	3471E-24	2	2464E-24	3220	-1	4919E-04	-4	4104E-04	-1	6874E-03
3223	0	0000E+00	-2	6613E-04	3224	8	4703E-22	-3	1710E-04	-9	4977E-04
3225	6	1599E-05	-2	1165E-04	3227	0	0000E+00	-1	5143E-04	-8	2007E-04
3228	4	1993E-04	5	9695E-25	3231	0	0000E+00	-3	6809E-03	-6	7815E-04
3232	-8	7458E-25	9	9922E-25	3233	2	3232E-04	-1	0979E-04	-7	9804E-04
3236	5	2940E-23	-1	7219E-05	3237	4	2352E-22	2	1320E-04	-4	2432E-04
3238	1	5598E-04	1	5419E-04	3240	0	0000E+00	2	3211E-04	-4	5029E-04
3249	-6	4419E-04	-2	0535E-04	3251	1	7259E-04	9	0931E-03	-3	3894E-03
3253	-8	8858E-05	-2	1540E-03	3254	-6	0401E-04	-2	9461E-04	-3	9619E-03
3255	-7	6305E-04	-3	1396E-04	3256	1	8790E-04	1	0156E-04	-3	3846E-03
3257	3	0694E-05	2	1019E-05	3258	-8	3700E-05	8	4703E-22	-3	7314E-03
3259	-8	2569E-04	6	7763E-21	3260	4	5386E-05	0	0000E+00	-2	1717E-03
3262	-5	1511E-04	-1	6588E-04	3264	3	4588E-04	1	4543E-04	-1	6257E-03
3266	1	3239E-04	6	4959E-05	3267	-4	8448E-04	-2	3769E-04	-1	5661E-03
3268	-3	8651E-04	-1	5664E-04	3269	3	4896E-04	1	7862E-04	-1	6248E-03
3270	4	2929E-04	1	9461E-04	3271	1	5143E-04	0	0000E+00	-1	6249E-03
3272	-4	1567E-04	3	3881E-21	3273	4	8280E-04	0	0000E+00	-1	1494E-03
3285	1	7408E-04	1	0586E-04	3287	7	5718E-05	-7	4749E-05	-2	7963E-03
3289	2	6380E-04	1	7039E-04	3292	1	2526E-04	1	8822E-05	-2	6791E-03
3293	1	7319E-04	9	3718E-05	3294	1	2163E-04	3	3760E-05	-1	6597E-03
3295	6	3157E-05	3	5677E-05	3296	-1	9274E-06	-6	7956E-05	-1	6033E-03
3297	3	2903E-04	0	0000E+00	3299	1	1046E-04	8	4703E-22	-2	6110E-03
3300	1	1516E-04	0	0000E+00	3301	-2	3973E-05	-2	1176E-22	-1	4861E-03
3306	2	3834E-05	8	7830E-05	3308	-1	6821E-04	2	5191E-05	-1	3147E-03
3310	2	6165E-04	1	5104E-04	3313	-7	4889E-05	7	9316E-06	-1	3864E-03
3314	5	0824E-05	4	8426E-05	3315	6	0113E-05	9	5337E-05	-1	1187E-03
3316	-1	0317E-04	3	4795E-05	3317	-1	1591E-04	1	2960E-04	-9	5228E-04
3318	3	0165E-04	3	3881E-21	3320	-5	7864E-05	8	4703E-22	-1	3523E-03
3321	8	1030E-05	0	0000E+00	3322	2	1133E-03	2	1176E-22	-9	0888E-04
3339	1	0008E-04	9	7600E-05	3341	1	4153E-04	1	6399E-04	-2	2505E-03
3343	8	0205E-05	7	6468E-05	3346	1	3965E-04	1	5246E-04	-2	2723E-03
3347	1	4771E-04	1	2885E-04	3348	-1	8424E-05	-6	0160E-08	-1	3704E-03



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3349	1 3405E-04	1 1549E-04	0 0000E+00	1 1549E-04	-1 8734E-03	3350	-7 6728E-06	2 6701E-05	-9 7463E-04
3351	1 4800E-04	0 0000E+00	0 0000E+00	-2 4337E-03	-2 4337E-03	3353	1 9228E-04	-1 6941E-21	-2 0274E-03
3354	-1 7161E-06	-3 9705E-23	-3 9705E-23	1 1883E-03	1 1883E-03	3355	1 7655E-07	4 1359E-23	-7 2772E-04
3360	-9 9599E-05	2 2998E-04	2 2998E-04	-1 1315E-03	-1 1315E-03	3362	4 8770E-05	3 6442E-04	-8 9156E-04
3364	-1 1386E-04	1 3386E-04	1 3386E-04	-1 2022E-03	-1 2022E-03	3367	1 4537E-05	2 4108E-04	-9 6301E-04
3368	1 0155E-05	1 2626E-04	1 2626E-04	-1 0456E-03	-1 0456E-03	3369	2 4324E-05	2 9063E-04	-7 9015E-04
3370	1 2371E-04	1 6314E-04	1 6314E-04	-7 8341E-04	-7 8341E-04	3371	1 7846E-04	4 0209E-04	-6 5668E-04
3372	1 2960E-05	2 1176E-22	2 1176E-22	-1 1202E-03	-1 1202E-03	3374	1 4816E-04	1 6941E-21	-8 5747E-04
3375	2 1803E-04	0 0000E+00	0 0000E+00	-7 4765E-04	-7 4765E-04	3376	3 0548E-04	0 0000E+00	-6 1833E-04
3393	1 1773E-04	1 6155E-05	1 6155E-05	-2 0762E-03	-2 0762E-03	3395	-2 2544E-04	-2 3222E-04	-1 4231E-03
3397	1 1807E-04	1 2496E-04	1 2496E-04	-1 9647E-03	-1 9647E-03	3400	-9 0896E-05	-2 1348E-05	-1 5624E-03
3401	8 3821E-05	8 6060E-05	8 6060E-05	-1 6791E-03	-1 6791E-03	3402	-1 6546E-05	-9 0279E-06	-7 2330E-04
3403	-2 0274E-04	-1 1596E-04	-1 1596E-04	-1 1675E-03	-1 1675E-03	3404	1 8396E-04	5 9597E-05	-6 6139E-04
3405	1 0502E-04	0 0000E+00	0 0000E+00	-1 6844E-03	-1 6844E-03	3407	-1 0655E-04	0 0000E+00	-1 3467E-03
3408	8 7016E-06	3 7058E-22	3 7058E-22	-5 3956E-04	-5 3956E-04	3409	2 1321E-04	-3 3881E-21	-5 5471E-04
3414	2 5386E-04	4 2121E-04	4 2121E-04	-8 3679E-04	-8 3679E-04	3416	1 6782E-04	2 7687E-04	-7 7236E-04
3418	1 5518E-04	2 9194E-04	2 9194E-04	-8 0313E-04	-8 0313E-04	3421	1 6764E-04	2 6014E-04	-7 3643E-04
3422	2 2667E-04	2 1082E-04	2 1082E-04	-7 5368E-04	-7 5368E-04	3423	1 7575E-04	4 0133E-04	-5 6890E-04
3424	4 2962E-05	1 0606E-04	1 0606E-04	-6 4374E-04	-6 4374E-04	3425	2 1225E-04	3 8953E-04	-5 0286E-04
3426	2 4180E-04	0 0000E+00	0 0000E+00	-7 2604E-04	-7 2604E-04	3428	1 7292E-04	0 0000E+00	-6 6384E-04
3429	2 3354E-04	0 0000E+00	0 0000E+00	-5 2900E-04	-5 2900E-04	3430	2 3137E-04	1 6941E-21	-4 7115E-04
3436	0 0000E+00	-1 4406E-04	-1 4406E-04	-1 6015E-03	-1 6015E-03	3438	8 2657E-05	-4 6580E-05	-1 4122E-03
3431	0 0000E+00	-4 0597E-05	-4 0597E-05	-1 5137E-03	-1 5137E-03	3452	0 0000E+00	-3 6066E-05	-6 8431E-04
3453	6 2248E-05	4 2352E-22	4 2352E-22	-1 3552E-03	-1 3552E-03	3455	-8 9078E-25	-1 0577E-24	-6 2286E-04
3459	0 0000E+00	4 2202E-05	4 2202E-05	-6 1516E-04	-6 1516E-04	3461	2 6654E-05	8 3810E-05	-5 8911E-04
3464	0 0000E+00	3 4064E-05	3 4064E-05	-5 2782E-04	-5 2782E-04	3465	0 0000E+00	1 6563E-04	-4 1059E-04
3466	2 7362E-05	4 2352E-22	4 2352E-22	-5 2544E-04	-5 2544E-04	3468	3 1113E-25	-6 0566E-26	-3 9377E-04
3476	-3 5894E-04	2 0710E-24	2 0710E-24	-4 0479E-03	-4 0479E-03	3477	-1 0785E-03	-2 4927E-05	-4 4160E-03
3478	-1 3137E-03	2 2159E-24	2 2159E-24	-3 7243E-03	-3 7243E-03	3479	0 0000E+00	4 1921E-05	-3 8261E-03
3480	-2 2982E-24	1 6072E-24	1 6072E-24	-3 2493E-03	-3 2493E-03	3481	-3 8113E-04	6 8168E-05	-3 9143E-03
3482	-1 0753E-03	-8 7566E-05	-8 7566E-05	-4 2472E-03	-4 2472E-03	3483	-1 3101E-03	-1 0410E-04	-3 5932E-03
3484	-4 2352E-22	8 4861E-05	8 4861E-05	-3 6508E-03	-3 6508E-03	3485	1 0588E-22	3 1141E-05	-3 1065E-03
3486	-4 0329E-04	3 7652E-06	3 7652E-06	-3 6763E-03	-3 6763E-03	3487	-1 2705E-03	-2 7735E-04	-3 3455E-03
3488	-1 0588E-22	2 1395E-05	2 1395E-05	-2 8981E-03	-2 8981E-03	3489	-3 6859E-04	4 5435E-25	-3 0118E-03
3490	-1 3122E-03	-6 8756E-05	-6 8756E-05	-3 1667E-03	-3 1667E-03	3491	-1 3078E-03	2 1162E-24	-2 6873E-03
3492	0 0000E+00	2 4811E-05	2 4811E-05	-2 8756E-03	-2 8756E-03	3493	-2 1786E-24	1 3974E-24	-2 6756E-03
3494	-3 1076E-04	-1 1382E-04	-1 1382E-04	-2 8798E-03	-2 8798E-03	3495	-1 2679E-03	-2 4356E-04	-2 8421E-03
3496	-1 1709E-03	-3 2544E-04	-3 2544E-04	-2 3523E-03	-2 3523E-03	3497	0 0000E+00	-3 9568E-05	-2 6025E-03
3498	4 2352E-22	1 6679E-04	1 6679E-04	-2 4046E-03	-2 4046E-03	3499	-2 2864E-04	-1 0753E-04	-2 7331E-03
3500	-1 0145E-03	-4 0291E-04	-4 0291E-04	-2 1452E-03	-2 1452E-03	3501	0 0000E+00	-1 5135E-04	-2 2597E-03
3510	-1 0723E-03	-2 4835E-04	-2 4835E-04	-4 0327E-03	-4 0327E-03	3512	0 0000E+00	6 0563E-05	-3 5120E-03
3514	-3 9888E-04	-1 0596E-04	-1 0596E-04	-3 5866E-03	-3 5866E-03	3515	-1 0160E-03	-4 6220E-04	-3 9014E-03
3516	-1 2122E-03	-4 6678E-04	-4 6678E-04	-3 1513E-03	-3 1513E-03	3517	-2 1176E-22	2 4640E-05	-3 4290E-03
3518	5 2940E-23	9 9636E-06	9 9636E-06	-2 7880E-03	-2 7880E-03	3519	-4 1401E-04	-3 3881E-21	-3 5161E-03
3520	-1 3010E-03	0 0000E+00	0 0000E+00	-3 0967E-03	-3 0967E-03	3521	-2 2765E-24	-1 5214E-24	-2 7526E-03
3523	-1 1835E-03	-3 9723E-04	-3 9723E-04	-2 6350E-03	-2 6350E-03	3525	2 1176E-22	-3 7585E-05	-2 4270E-03

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	3527	3529	3530	3531	3532	3533
-2 1129E-04	-1 1029E-04	-2 5887E-03	-1 1237E-03	-5 5689E-04	-2 5197E-03	
-9 2365E-04	-4 1628E-04	-1 9528E-03	0 0000E+00	-1 2417E-05	-2 3587E-03	
0 0000E+00	-6 1971E-05	-2 1362E-03	-2 4173E-04	0 0000E+00	-2 5350E-03	
-1 0165E-03	1 3553E-20	-1 8623E-03	-2 0165E-24	-1 4808E-24	-2 0941E-03	

## REACTION FORCES

NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT	NODE	X - COMPONENT	Y - COMPONENT	Z - COMPONENT
1	0 0000E+00	-760 3	0 0000E+00	2	0 0000E+00	-1629	0 0000E+00
3	0 0000E+00	-78 57	0 0000E+00	10	0 0000E+00	-1239	0 0000E+00
11	0 0000E+00	-3649	0 0000E+00	12	0 0000E+00	-210 3	0 0000E+00
19	0 0000E+00	-693 8	0 0000E+00	20	0 0000E+00	-1245	0 0000E+00
21	0 0000E+00	-273 3	0 0000E+00	28	0 0000E+00	-1026	0 0000E+00
29	0 0000E+00	-325 1	0 0000E+00	30	302 2	-201 6	0 0000E+00
33	605 8	0 0000E+00	0 0000E+00	36	597 5	0 0000E+00	0 0000E+00
37	0 0000E+00	-3139	0 0000E+00	38	0 0000E+00	-2986	0 0000E+00
39	1342	-1501	0 0000E+00	42	2685	0 0000E+00	0 0000E+00
45	2680	0 0000E+00	0 0000E+00	46	0 0000E+00	-1046	0 0000E+00
47	0 0000E+00	-989 5	0 0000E+00	48	501 3	-464 7	0 0000E+00
51	1001	0 0000E+00	0 0000E+00	54	993 8	0 0000E+00	0 0000E+00
61	0 0000E+00	552 7	0 0000E+00	62	0 0000E+00	2164	0 0000E+00
63	0 0000E+00	1204	0 0000E+00	70	0 0000E+00	950 1	0 0000E+00
71	0 0000E+00	4587	0 0000E+00	72	0 0000E+00	2494	0 0000E+00
81	0 0000E+00	566 8	0 0000E+00	80	0 0000E+00	1436	0 0000E+00
89	0 0000E+00	888 1	0 0000E+00	88	0 0000E+00	821 6	0 0000E+00
99	0 0000E+00	561 3	0 0000E+00	98	0 0000E+00	1685	0 0000E+00
108	0 0000E+00	1408	0 0000E+00	107	0 0000E+00	585 5	0 0000E+00
117	0 0000E+00	409 4	0 0000E+00	116	0 0000E+00	295 0	0 0000E+00
126	0 0000E+00	148 6	0 0000E+00	125	0 0000E+00	1072	0 0000E+00
135	0 0000E+00	683 7	0 0000E+00	134	0 0000E+00	297 2	0 0000E+00
142	0 0000E+00	194 4	0 0000E+00	141	587 2	0 0000E+00	0 0000E+00
144	0 0000E+00	263 8	0 0000E+00	143	0 0000E+00	521 4	0 0000E+00
151	296 1	238 6	0 0000E+00	150	2673	0 0000E+00	0 0000E+00
153	0 0000E+00	1813	0 0000E+00	152	0 0000E+00	3231	0 0000E+00
160	1340	1547	0 0000E+00	159	997 6	0 0000E+00	0 0000E+00
162	0 0000E+00	555 0	0 0000E+00	161	0 0000E+00	1051	0 0000E+00
172	499 9	481 7	0 0000E+00	163	0 0000E+00	-743 7	0 0000E+00
174	0 0000E+00	-375 5	0 0000E+00	165	0 0000E+00	-646 4	0 0000E+00
	0 0000E+00	-569 8	0 0000E+00	173	0 0000E+00	-414 9	0 0000E+00
	0 0000E+00	-350 8	0 0000E+00	190	0 0000E+00	-255 2	0 0000E+00

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191	0.0000E+00	-168.5	0.0000E+00	192	177.1	-121.7	0.0000E+00
195	351.7	0.0000E+00	0.0000E+00	198	347.5	0.0000E+00	0.0000E+00
199	0.0000E+00	-218.0	0.0000E+00	200	0.0000E+00	-97.65	0.0000E+00
201	105.9	-66.80	0.0000E+00	204	208.9	0.0000E+00	0.0000E+00
207	204.0	0.0000E+00	0.0000E+00	223	0.0000E+00	829.8	0.0000E+00
224	0.0000E+00	638.6	0.0000E+00	225	0.0000E+00	486.6	0.0000E+00
232	0.0000E+00	568.3	0.0000E+00	233	0.0000E+00	539.1	0.0000E+00
234	0.0000E+00	351.7	0.0000E+00	251	0.0000E+00	298.7	0.0000E+00
252	0.0000E+00	215.1	0.0000E+00	260	0.0000E+00	227.9	0.0000E+00
261	0.0000E+00	151.9	0.0000E+00	278	0.0000E+00	140.2	0.0000E+00
279	0.0000E+00	97.15	0.0000E+00	287	0.0000E+00	107.8	0.0000E+00
288	0.0000E+00	63.82	0.0000E+00	303	345.8	0.0000E+00	0.0000E+00
304	0.0000E+00	194.8	0.0000E+00	305	0.0000E+00	342.3	0.0000E+00
306	171.7	151.5	0.0000E+00	312	201.3	0.0000E+00	0.0000E+00
313	0.0000E+00	101.0	0.0000E+00	314	0.0000E+00	192.6	0.0000E+00
315	99.61	84.49	0.0000E+00	325	0.0000E+00	-806.9	0.0000E+00
326	0.0000E+00	-429.8	0.0000E+00	327	0.0000E+00	-106.5	0.0000E+00
334	0.0000E+00	-1823	0.0000E+00	335	0.0000E+00	-1259	0.0000E+00
336	0.0000E+00	-349.6	0.0000E+00	343	0.0000E+00	-1231	0.0000E+00
344	0.0000E+00	-545.5	0.0000E+00	345	0.0000E+00	-477.8	0.0000E+00
358	0.0000E+00	890.3	0.0000E+00	359	0.0000E+00	528.3	0.0000E+00
360	0.0000E+00	398.6	0.0000E+00	367	0.0000E+00	214.1	0.0000E+00
368	0.0000E+00	192.1	0.0000E+00	369	0.0000E+00	1397	0.0000E+00
376	0.0000E+00	1394	0.0000E+00	377	0.0000E+00	897.2	0.0000E+00
378	0.0000E+00	717.2	0.0000E+00	386	0.0000E+00	384.6	0.0000E+00
387	0.0000E+00	255.6	0.0000E+00	395	0.0000E+00	1198	0.0000E+00
386	0.0000E+00	846.5	0.0000E+00	404	0.0000E+00	620.0	0.0000E+00
405	0.0000E+00	418.5	0.0000E+00	413	0.0000E+00	139.9	0.0000E+00
414	0.0000E+00	490.0	0.0000E+00	422	0.0000E+00	460.3	0.0000E+00
423	0.0000E+00	871.2	0.0000E+00	431	0.0000E+00	226.4	0.0000E+00
432	0.0000E+00	267.0	0.0000E+00	433	0.0000E+00	-580.3	0.0000E+00
439	0.0000E+00	-989.4	0.0000E+00	445	0.0000E+00	-605.9	0.0000E+00
469	0.0000E+00	-449.9	0.0000E+00	475	0.0000E+00	-332.7	0.0000E+00
481	0.0000E+00	-211.5	0.0000E+00	491	0.0000E+00	-535.7	0.0000E+00
497	0.0000E+00	-214.4	0.0000E+00	503	0.0000E+00	-85.24	0.0000E+00
541	0.0000E+00	-425.7	0.0000E+00	542	0.0000E+00	-631.8	0.0000E+00
547	0.0000E+00	-329.8	0.0000E+00	548	0.0000E+00	-469.5	0.0000E+00
553	0.0000E+00	-216.9	0.0000E+00	581	0.0000E+00	460.8	0.0000E+00
587	0.0000E+00	336.2	0.0000E+00	593	0.0000E+00	216.0	0.0000E+00
613	0.0000E+00	-510.4	0.0000E+00	619	0.0000E+00	-899.4	0.0000E+00
625	0.0000E+00	-720.2	0.0000E+00	635	0.0000E+00	-236.2	0.0000E+00
641	0.0000E+00	-297.3	0.0000E+00	647	0.0000E+00	-477.6	0.0000E+00
685	0.0000E+00	-48.83	0.0000E+00	691	0.0000E+00	-302.2	0.0000E+00
692	0.0000E+00	-97.95	0.0000E+00	697	0.0000E+00	-528.2	0.0000E+00
698	0.0000E+00	-750.5	0.0000E+00	704	464.0	-478.7	0.0000E+00
706	2056	0.0000E+00	0.0000E+00	708	1709	0.0000E+00	0.0000E+00

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710	1254	-702 1	0 0000E+00	712	2568	0 0000E+00	0 0000E+00
714	1672	0 0000E+00	0 0000E+00	716	535 1	-832 6	-118 3
718	700 3	0 0000E+00	0 0000E+00	720	110 9	0 0000E+00	-154 0
725	0 0000E+00	519 3	0 0000E+00	731	0 0000E+00	922 8	0 0000E+00
737	0 0000E+00	739 7	0 0000E+00	742	1575	0 0000E+00	0 0000E+00
744	773 7	735 2	0 0000E+00	748	1284	0 0000E+00	0 0000E+00
750	633 1	546 6	0 0000E+00	754	-69 05	0 0000E+00	-170 8
756	-7 108	277 3	-95 15	757	0 0000E+00	-401 4	0 0000E+00
758	301 4	-408 2	0 0000E+00	760	613 5	0 0000E+00	0 0000E+00
762	640 3	0 0000E+00	0 0000E+00	763	0 0000E+00	-840 7	0 0000E+00
764	1048	-1208	0 0000E+00	766	2107	0 0000E+00	0 0000E+00
768	2217	0 0000E+00	0 0000E+00	778	655 2	0 0000E+00	0 0000E+00
779	0 0000E+00	388 0	0 0000E+00	780	326 6	396 1	0 0000E+00
784	2303	0 0000E+00	0 0000E+00	785	0 0000E+00	769 8	0 0000E+00
786	1155	1164	0 0000E+00	799	0 0000E+00	-607 2	0 0000E+00
800	0 0000E+00	-1020	0 0000E+00	805	0 0000E+00	-615 7	0 0000E+00
806	0 0000E+00	-1039	0 0000E+00	827	0 0000E+00	-671 1	0 0000E+00
828	0 0000E+00	-912 6	0 0000E+00	833	0 0000E+00	-615 5	0 0000E+00
834	0 0000E+00	-914 6	0 0000E+00	895	0 0000E+00	-541 6	0 0000E+00
896	0 0000E+00	-655 0	0 0000E+00	901	0 0000E+00	-595 8	0 0000E+00
902	0 0000E+00	-786 3	0 0000E+00	920	0 0000E+00	-536 9	0 0000E+00
926	0 0000E+00	-397 0	0 0000E+00	947	0 0000E+00	622 2	0 0000E+00
948	0 0000E+00	1209	0 0000E+00	953	0 0000E+00	631 2	0 0000E+00
954	0 0000E+00	1226	0 0000E+00	971	0 0000E+00	216 6	0 0000E+00
972	0 0000E+00	339 4	0 0000E+00	977	0 0000E+00	184 4	0 0000E+00
978	0 0000E+00	304 4	0 0000E+00	995	0 0000E+00	-405 9	0 0000E+00
1004	0 0000E+00	-430 3	0 0000E+00	1022	0 0000E+00	-86 52	-413 3
1023	137 5	-82 27	0 0000E+00	1025	0 0000E+00	-824 2	-819 9
1026	271 4	0 0000E+00	-418 9	1028	0 0000E+00	0 0000E+00	0 0000E+00
1029	262 8	0 0000E+00	-420 2	1031	0 0000E+00	-235 4	0 0000E+00
1032	259 9	-172 5	0 0000E+00	1035	512 4	0 0000E+00	0 0000E+00
1038	496 6	0 0000E+00	0 0000E+00	1040	0 0000E+00	-246 8	0 0000E+00
1041	249 8	-177 1	0 0000E+00	1044	495 9	0 0000E+00	0 0000E+00
1047	488 7	0 0000E+00	0 0000E+00	1073	0 0000E+00	875 6	0 0000E+00
1074	0 0000E+00	734 3	0 0000E+00	1082	0 0000E+00	872 8	0 0000E+00
1083	0 0000E+00	689 8	0 0000E+00	1109	0 0000E+00	553 6	0 0000E+00
1110	0 0000E+00	390 8	0 0000E+00	1118	0 0000E+00	462 3	0 0000E+00
1119	0 0000E+00	341 6	0 0000E+00	1145	0 0000E+00	245 3	0 0000E+00
1154	0 0000E+00	237 4	0 0000E+00	1169	0 0000E+00	0 0000E+00	-811 0
1170	253 4	0 0000E+00	-423 2	1172	0 0000E+00	233 0	-404 0
1173	124 8	104 2	-211 8	1179	485 3	0 0000E+00	0 0000E+00
1181	0 0000E+00	494 6	0 0000E+00	1182	240 9	211 2	0 0000E+00
1188	486 4	0 0000E+00	0 0000E+00	1190	0 0000E+00	495 7	0 0000E+00
1191	242 1	216 3	0 0000E+00	1201	0 0000E+00	3358	0 0000E+00
1203	0 0000E+00	3713	0 0000E+00	1204	0 0000E+00	2385	0 0000E+00
1206	0 0000E+00	3061	0 0000E+00	1208	0 0000E+00	3119	0 0000E+00

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1222	0.0000E+00	6078	0.0000E+00	1224	0.0000E+00	4132	0.0000E+00
1226	0.0000E+00	775 B	0.0000E+00	1227	0.0000E+00	4523	0.0000E+00
1229	0.0000E+00	3601	0.0000E+00	1243	0.0000E+00	3777	0.0000E+00
1245	0.0000E+00	2866	0.0000E+00	1255	0.0000E+00	2768	0.0000E+00
1257	0.0000E+00	3451	0.0000E+00	1259	0.0000E+00	1881	0.0000E+00
1268	0.0000E+00	5088	0.0000E+00	1270	0.0000E+00	3890	0.0000E+00
1272	0.0000E+00	5803	0.0000E+00	1281	0.0000E+00	3290	0.0000E+00
1288	0.0000E+00	385 2	0.0000E+00	1291	0.0000E+00	924.7	0.0000E+00
1293	0.0000E+00	1212	0.0000E+00	1294	-1149	0.0000E+00	0.0000E+00
1295	-967 0	784 7	0.0000E+00	1302	-1136	0.0000E+00	0.0000E+00
1303	-1933	0.0000E+00	0.0000E+00	1308	-1926	0.0000E+00	0.0000E+00
1309	0.0000E+00	2103	0.0000E+00	1312	0.0000E+00	2976	0.0000E+00
1314	0.0000E+00	7495	0.0000E+00	1315	-2985	0.0000E+00	0.0000E+00
1316	-3217	3841	0.0000E+00	1323	-2988	0.0000E+00	0.0000E+00
1324	-6429	0.0000E+00	0.0000E+00	1329	-6442	0.0000E+00	0.0000E+00
1330	0.0000E+00	5367	0.0000E+00	1332	0.0000E+00	5709	0.0000E+00
1334	-4432	0.0000E+00	0.0000E+00	1339	-4441	0.0000E+00	0.0000E+00
1358	0.0000E+00	-3560	0.0000E+00	1359	0.0000E+00	-4711	0.0000E+00
1370	0.0000E+00	-2993	0.0000E+00	1361	0.0000E+00	-3592	0.0000E+00
1362	0.0000E+00	-4042	0.0000E+00	1379	0.0000E+00	-5999	0.0000E+00
1380	0.0000E+00	-5377	0.0000E+00	1381	0.0000E+00	-4017	0.0000E+00
1382	0.0000E+00	-4892	0.0000E+00	1383	0.0000E+00	-4197	0.0000E+00
1394	0.0000E+00	-4686	0.0000E+00	1395	0.0000E+00	-3412	0.0000E+00
1412	0.0000E+00	-1734	0.0000E+00	1414	0.0000E+00	-1302	0.0000E+00
1415	0.0000E+00	-2544	0.0000E+00	1416	0.0000E+00	-1635	0.0000E+00
1433	0.0000E+00	-2462	0.0000E+00	1435	0.0000E+00	-1888	0.0000E+00
1436	0.0000E+00	-2723	0.0000E+00	1437	0.0000E+00	-2286	0.0000E+00
1448	0.0000E+00	-1777	0.0000E+00	1449	0.0000E+00	-1703	0.0000E+00
1466	0.0000E+00	-710 9	0.0000E+00	1468	0.0000E+00	-471 2	0.0000E+00
1469	0.0000E+00	-967 8	0.0000E+00	1470	0.0000E+00	-455 3	0.0000E+00
1487	0.0000E+00	-1103	0.0000E+00	1489	0.0000E+00	-876.6	0.0000E+00
1490	0.0000E+00	-2093	0.0000E+00	1491	0.0000E+00	-1521	0.0000E+00
1502	0.0000E+00	-1577	0.0000E+00	1503	0.0000E+00	-1577	0.0000E+00
1514	0.0000E+00	-133 1	0.0000E+00	1516	0.0000E+00	-796.6	0.0000E+00
1527	0.0000E+00	-292 1	0.0000E+00	1529	0.0000E+00	-4133	0.0000E+00
1536	0.0000E+00	-680 7	0.0000E+00	1543	-1126	0.0000E+00	0.0000E+00
1551	-1124	0.0000E+00	0.0000E+00	1552	-1918	0.0000E+00	0.0000E+00
1553	0.0000E+00	-934 8	0.0000E+00	1555	0.0000E+00	-1036	0.0000E+00
1556	0.0000E+00	-1550	0.0000E+00	1557	-954 4	-839 1	0.0000E+00
1564	-2990	0.0000E+00	0.0000E+00	1572	-2998	0.0000E+00	0.0000E+00
1573	-6438	0.0000E+00	0.0000E+00	1574	0.0000E+00	-2701	0.0000E+00
1576	0.0000E+00	-3116	0.0000E+00	1577	0.0000E+00	-7743	0.0000E+00
1578	-3234	-3883	0.0000E+00	1583	-4449	0.0000E+00	0.0000E+00
1588	-4457	0.0000E+00	0.0000E+00	1589	0.0000E+00	-5528	0.0000E+00
1590	0.0000E+00	-5760	0.0000E+00	1591	0.0000E+00	2289	0.0000E+00
1593	0.0000E+00	796 1	0.0000E+00	1595	0.0000E+00	852 5	0.0000E+00

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1604	0.0000E+00	1492	0.0000E+00	1606	0.0000E+00	892.5	0.0000E+00
1608	0.0000E+00	1377	0.0000E+00	1617	0.0000E+00	891.5	0.0000E+00
1624	0.0000E+00	506.8	0.0000E+00	1627	0.0000E+00	475.6	0.0000E+00
1629	0.0000E+00	269.7	0.0000E+00	1631	0.0000E+00	823.9	0.0000E+00
1645	0.0000E+00	643.9	0.0000E+00	1648	0.0000E+00	443.2	0.0000E+00
1650	0.0000E+00	553.3	0.0000E+00	1651	0.0000E+00	-122.9	0.0000E+00
1652	0.0000E+00	1214	0.0000E+00	1657	0.0000E+00	-437.4	0.0000E+00
1660	0.0000E+00	-71.03	0.0000E+00	1663	0.0000E+00	-737.9	0.0000E+00
1678	0.0000E+00	-1073	0.0000E+00	1684	0.0000E+00	293.7	0.0000E+00
1688	0.0000E+00	2222	0.0000E+00	1689	0.0000E+00	795.4	0.0000E+00
1693	0.0000E+00	643.7	0.0000E+00	1696	0.0000E+00	-149.9	0.0000E+00
1701	0.0000E+00	1349	0.0000E+00	1702	0.0000E+00	680.7	0.0000E+00
1705	0.0000E+00	273.2	0.0000E+00	1708	0.0000E+00	65.12	0.0000E+00
1711	0.0000E+00	-1363	0.0000E+00	1714	0.0000E+00	-1730	0.0000E+00
1717	0.0000E+00	976.0	0.0000E+00	1720	0.0000E+00	-995.9	0.0000E+00
1726	0.0000E+00	772.9	0.0000E+00	1729	0.0000E+00	-479.9	0.0000E+00
1732	0.0000E+00	-795.2	0.0000E+00	1738	0.0000E+00	330.7	0.0000E+00
1741	0.0000E+00	254.6	0.0000E+00	1744	0.0000E+00	-935.8	0.0000E+00
1747	0.0000E+00	-1992	0.0000E+00	1777	0.0000E+00	2186	0.0000E+00
1779	0.0000E+00	811.3	0.0000E+00	1781	0.0000E+00	768.4	0.0000E+00
1790	0.0000E+00	1423	0.0000E+00	1792	0.0000E+00	894.4	0.0000E+00
1794	0.0000E+00	1250	0.0000E+00	1803	0.0000E+00	849.9	0.0000E+00
1810	0.0000E+00	439.1	0.0000E+00	1814	0.0000E+00	111.8	0.0000E+00
1823	0.0000E+00	519.1	0.0000E+00	1827	0.0000E+00	263.2	0.0000E+00
1843	0.0000E+00	192.2	0.0000E+00	1846	0.0000E+00	595.5	0.0000E+00
1848	0.0000E+00	244.9	0.0000E+00	1849	0.0000E+00	0.0000E+00	0.0000E+00
1850	-201.3	166.0	0.0000E+00	1857	-737.1	0.0000E+00	0.0000E+00
1858	-403.5	0.0000E+00	0.0000E+00	1863	-400.7	0.0000E+00	0.0000E+00
1864	0.0000E+00	108.1	0.0000E+00	1867	0.0000E+00	333.1	0.0000E+00
1869	0.0000E+00	252.3	0.0000E+00	1870	-415.1	0.0000E+00	0.0000E+00
1871	-220.1	170.3	0.0000E+00	1878	-407.4	0.0000E+00	0.0000E+00
1879	-426.2	0.0000E+00	0.0000E+00	1884	-414.7	0.0000E+00	0.0000E+00
1907	0.0000E+00	-2328	0.0000E+00	1908	0.0000E+00	-805.1	0.0000E+00
1909	0.0000E+00	-971.4	0.0000E+00	1920	0.0000E+00	-1508	0.0000E+00
1921	0.0000E+00	-906.6	0.0000E+00	1922	0.0000E+00	-1359	0.0000E+00
1929	0.0000E+00	-909.1	0.0000E+00	1945	0.0000E+00	-834.2	0.0000E+00
1948	0.0000E+00	-1216	0.0000E+00	1949	0.0000E+00	-496.0	0.0000E+00
1950	0.0000E+00	-366.3	0.0000E+00	1967	0.0000E+00	-736.4	0.0000E+00
1969	0.0000E+00	-864.2	0.0000E+00	1970	0.0000E+00	-739.2	0.0000E+00
1971	0.0000E+00	-886.7	0.0000E+00	2000	0.0000E+00	-561.0	0.0000E+00
2002	0.0000E+00	-475.4	0.0000E+00	2003	0.0000E+00	-323.6	0.0000E+00
2004	0.0000E+00	-259.9	0.0000E+00	2021	0.0000E+00	-468.8	0.0000E+00
2023	0.0000E+00	-358.1	0.0000E+00	2024	0.0000E+00	-504.6	0.0000E+00
2025	0.0000E+00	-332.2	0.0000E+00	2034	0.0000E+00	-335.4	0.0000E+00
2056	0.0000E+00	-228.2	0.0000E+00	2057	0.0000E+00	-204.8	0.0000E+00
2058	0.0000E+00	-115.8	0.0000E+00	2075	0.0000E+00	-233.2	0.0000E+00

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2077	0.0000E+00	-175 1	0.0000E+00	2078	0.0000E+00	-215 8	0.0000E+00
2079	0.0000E+00	-108 3	0.0000E+00	2102	0.0000E+00	-120 8	0.0000E+00
2104	0.0000E+00	-203 0	0.0000E+00	2115	0.0000E+00	-49 73	0.0000E+00
2117	0.0000E+00	-204 4	0.0000E+00	2131	0.0000E+00	0.0000E+00	0.0000E+00
2139	-711 8	0.0000E+00	0.0000E+00	2140	-724 4	0.0000E+00	0.0000E+00
2141	0.0000E+00	-647 9	0.0000E+00	2143	-395 1	0.0000E+00	0.0000E+00
2144	0.0000E+00	-351 8	0.0000E+00	2145	-197 7	-684 8	0.0000E+00
2152	-400 2	0.0000E+00	0.0000E+00	2160	-396 3	-182 4	0.0000E+00
2161	-409 8	0.0000E+00	0.0000E+00	2162	0.0000E+00	0.0000E+00	0.0000E+00
2164	0.0000E+00	-379 5	0.0000E+00	2165	0.0000E+00	-356 7	0.0000E+00
2166	-201 6	-186 8	0.0000E+00	2179	0.0000E+00	3728.	0.0000E+00
2181	0.0000E+00	1982	0.0000E+00	2183	0.0000E+00	1657.	0.0000E+00
2192	0.0000E+00	3170	0.0000E+00	2194	0.0000E+00	1965.	0.0000E+00
2196	0.0000E+00	1638.	0.0000E+00	2205	0.0000E+00	3169.	0.0000E+00
2207	0.0000E+00	2001.	0.0000E+00	2209	0.0000E+00	1718.	0.0000E+00
2225	0.0000E+00	687 8	0.0000E+00	2228	0.0000E+00	665 0	0.0000E+00
2230	0.0000E+00	190 5	0.0000E+00	2232	0.0000E+00	1616.	0.0000E+00
2246	0.0000E+00	536 4	0.0000E+00	2249	0.0000E+00	445 2	0.0000E+00
2251	0.0000E+00	129 5	0.0000E+00	2253	0.0000E+00	1558.	0.0000E+00
2267	0.0000E+00	526 8	0.0000E+00	2270	0.0000E+00	423 9	0.0000E+00
2272	0.0000E+00	167 7	0.0000E+00	2274	0.0000E+00	1621.	0.0000E+00
2310	0.0000E+00	2727.	0.0000E+00	2311	0.0000E+00	2179.	0.0000E+00
2323	0.0000E+00	3089.	0.0000E+00	2324	0.0000E+00	2020.	0.0000E+00
2336	0.0000E+00	3072.	0.0000E+00	2337	0.0000E+00	2038.	0.0000E+00
2438	0.0000E+00	2101.	0.0000E+00	2440	0.0000E+00	1367.	0.0000E+00
2442	0.0000E+00	2030.	0.0000E+00	2451	0.0000E+00	2382.	0.0000E+00
2453	0.0000E+00	1633.	0.0000E+00	2455	0.0000E+00	1731.	0.0000E+00
2464	0.0000E+00	2771.	0.0000E+00	2466	0.0000E+00	1943.	0.0000E+00
2468	0.0000E+00	1667.	0.0000E+00	2484	0.0000E+00	2105.	0.0000E+00
2487	-2816.	0.0000E+00	847 9	2488	0.0000E+00	336 0	0.0000E+00
2492	-2232.	0.0000E+00	981 8	2497	0.0000E+00	1038.	0.0000E+00
2501	0.0000E+00	195 9	0.0000E+00	2510	0.0000E+00	670 5	0.0000E+00
2514	0.0000E+00	147 9	0.0000E+00	2530	0.0000E+00	56 51	783 5
2533	0.0000E+00	395 1	887 3	2534	0.0000E+00	0.0000E+00	1677.
2535	0.0000E+00	601 0	0.0000E+00	2536	-426 0	0.0000E+00	941 5
2537	-494 5	398 9	0.0000E+00	2538	0.0000E+00	0.0000E+00	1536.
2541	0.0000E+00	0.0000E+00	1779	2542	0.0000E+00	0.0000E+00	1653.
2544	-427 7	0.0000E+00	942 9	2545	-972 0	0.0000E+00	0.0000E+00
2546	0.0000E+00	0.0000E+00	1496	2548	0.0000E+00	0.0000E+00	1785.
2550	-949 2	0.0000E+00	0.0000E+00	2551	0.0000E+00	286 9	0.0000E+00
2554	0.0000E+00	812 5	0.0000E+00	2556	0.0000E+00	627 0	0.0000E+00
2557	-899 5	0.0000E+00	0.0000E+00	2558	-478 9	414 3	0.0000E+00
2565	-893 4	0.0000E+00	0.0000E+00	2566	-951 7	0.0000E+00	0.0000E+00
2571	-940 8	0.0000E+00	0.0000E+00	2572	0.0000E+00	291 2	0.0000E+00
2575	0.0000E+00	841 1	0.0000E+00	2577	0.0000E+00	647 7	0.0000E+00
2578	-1004	0.0000E+00	0.0000E+00	2579	-528 0	432 7	0.0000E+00

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2586	-990.3	0.0000E+00	0.0000E+00	0.0000E+00	2587	-1042	0.0000E+00	0.0000E+00	0.0000E+00
2592	-1026	0.0000E+00	0.0000E+00	0.0000E+00	2615	0.0000E+00	-3799	0.0000E+00	0.0000E+00
2616	0.0000E+00	-2007	0.0000E+00	0.0000E+00	2617	0.0000E+00	-1961	0.0000E+00	0.0000E+00
2628	0.0000E+00	-3222	0.0000E+00	0.0000E+00	2639	0.0000E+00	-1988	0.0000E+00	0.0000E+00
2630	0.0000E+00	-1924	0.0000E+00	0.0000E+00	2641	0.0000E+00	-3220	0.0000E+00	0.0000E+00
2642	0.0000E+00	-2025	0.0000E+00	0.0000E+00	2643	0.0000E+00	-1986	0.0000E+00	0.0000E+00
2667	0.0000E+00	-1307	0.0000E+00	0.0000E+00	2669	0.0000E+00	-1744	0.0000E+00	0.0000E+00
2670	0.0000E+00	-1298	0.0000E+00	0.0000E+00	2671	0.0000E+00	-1704	0.0000E+00	0.0000E+00
2688	0.0000E+00	-1163	0.0000E+00	0.0000E+00	2690	0.0000E+00	-2050	0.0000E+00	0.0000E+00
2691	0.0000E+00	-1409	0.0000E+00	0.0000E+00	2692	0.0000E+00	-1786	0.0000E+00	0.0000E+00
2709	0.0000E+00	-1112	0.0000E+00	0.0000E+00	2711	0.0000E+00	-1991	0.0000E+00	0.0000E+00
2712	0.0000E+00	-1255	0.0000E+00	0.0000E+00	2713	0.0000E+00	-1470	0.0000E+00	0.0000E+00
2742	0.0000E+00	-1406	0.0000E+00	0.0000E+00	2744	0.0000E+00	-1214	0.0000E+00	0.0000E+00
2745	0.0000E+00	-1201	0.0000E+00	0.0000E+00	2746	0.0000E+00	-793.7	0.0000E+00	0.0000E+00
2763	0.0000E+00	-1281	0.0000E+00	0.0000E+00	2765	0.0000E+00	-1031	0.0000E+00	0.0000E+00
2766	0.0000E+00	-1129	0.0000E+00	0.0000E+00	2767	0.0000E+00	-761.5	0.0000E+00	0.0000E+00
2784	0.0000E+00	-1096	0.0000E+00	0.0000E+00	2786	0.0000E+00	-845.4	0.0000E+00	0.0000E+00
2787	0.0000E+00	-806.5	0.0000E+00	0.0000E+00	2788	0.0000E+00	-590.1	0.0000E+00	0.0000E+00
2817	0.0000E+00	-561.7	0.0000E+00	0.0000E+00	2819	0.0000E+00	-467.6	0.0000E+00	0.0000E+00
2820	0.0000E+00	-508.6	0.0000E+00	0.0000E+00	2821	0.0000E+00	-473.3	0.0000E+00	0.0000E+00
2838	0.0000E+00	-554.4	0.0000E+00	0.0000E+00	2840	0.0000E+00	-434.5	0.0000E+00	0.0000E+00
2841	0.0000E+00	-495.8	0.0000E+00	0.0000E+00	2842	0.0000E+00	-368.8	0.0000E+00	0.0000E+00
2859	0.0000E+00	-507.8	0.0000E+00	0.0000E+00	2861	0.0000E+00	-395.2	0.0000E+00	0.0000E+00
2862	0.0000E+00	-440.0	0.0000E+00	0.0000E+00	2863	0.0000E+00	-282.0	0.0000E+00	0.0000E+00
2879	-1610	0.0000E+00	0.0000E+00	1032	2884	-1394	0.0000E+00	1046	0.0000E+00
2886	0.0000E+00	-748.8	0.0000E+00	0.0000E+00	2888	0.0000E+00	-758.4	0.0000E+00	0.0000E+00
2899	0.0000E+00	-400.8	0.0000E+00	0.0000E+00	2901	0.0000E+00	-638.5	0.0000E+00	0.0000E+00
2912	0.0000E+00	-251.9	0.0000E+00	0.0000E+00	2914	0.0000E+00	-571.4	0.0000E+00	0.0000E+00
2926	0.0000E+00	0.0000E+00	0.0000E+00	1624	2928	-427.6	0.0000E+00	943.7	0.0000E+00
2930	0.0000E+00	0.0000E+00	0.0000E+00	1443	2933	0.0000E+00	0.0000E+00	1790	0.0000E+00
2934	0.0000E+00	0.0000E+00	0.0000E+00	1606	2936	-424.0	0.0000E+00	943.7	0.0000E+00
2937	-934.7	0.0000E+00	0.0000E+00	0.0000E+00	2938	0.0000E+00	-435.1	714.9	0.0000E+00
2940	0.0000E+00	-460.5	0.0000E+00	895.9	2941	0.0000E+00	-884.1	0.0000E+00	0.0000E+00
2942	-463.9	-445.9	0.0000E+00	0.0000E+00	2949	-887.6	0.0000E+00	0.0000E+00	0.0000E+00
2957	-884.9	0.0000E+00	0.0000E+00	0.0000E+00	2958	-934.0	0.0000E+00	0.0000E+00	0.0000E+00
2959	0.0000E+00	-958.1	0.0000E+00	0.0000E+00	2961	0.0000E+00	-933.1	0.0000E+00	0.0000E+00
2962	0.0000E+00	-907.1	0.0000E+00	0.0000E+00	2963	-464.3	-459.2	0.0000E+00	0.0000E+00
2970	-976.0	0.0000E+00	0.0000E+00	0.0000E+00	2978	-966.4	0.0000E+00	0.0000E+00	0.0000E+00
2979	-1020	0.0000E+00	0.0000E+00	0.0000E+00	2980	0.0000E+00	-948.7	0.0000E+00	0.0000E+00
2982	0.0000E+00	-962.1	0.0000E+00	0.0000E+00	2983	0.0000E+00	-933.2	0.0000E+00	0.0000E+00
2984	-505.4	-478.4	0.0000E+00	0.0000E+00	2997	0.0000E+00	2520	0.0000E+00	0.0000E+00
2999	0.0000E+00	2827	0.0000E+00	0.0000E+00	3001	0.0000E+00	3285	0.0000E+00	0.0000E+00
3010	0.0000E+00	4431	0.0000E+00	0.0000E+00	3012	0.0000E+00	2656	0.0000E+00	0.0000E+00
3014	0.0000E+00	2250	0.0000E+00	0.0000E+00	3030	0.0000E+00	1596	0.0000E+00	0.0000E+00
3033	0.0000E+00	1609	0.0000E+00	0.0000E+00	3035	0.0000E+00	2041	0.0000E+00	0.0000E+00
3037	0.0000E+00	3495	0.0000E+00	0.0000E+00	3051	0.0000E+00	1198	0.0000E+00	0.0000E+00



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3054	0.0000E+00	1262	0.0000E+00	3056	0.0000E+00	363.4	0.0000E+00
3056	0.0000E+00	2333	0.0000E+00	3094	0.0000E+00	1415	0.0000E+00
3107	0.0000E+00	2427	0.0000E+00	3195	0.0000E+00	1152	0.0000E+00
3197	0.0000E+00	1295	0.0000E+00	3199	0.0000E+00	3262	0.0000E+00
3215	0.0000E+00	4584	0.0000E+00	3218	0.0000E+00	0.0000E+00	0.0000E+00
3219	-2284	1533	0.0000E+00	3223	-3210	0.0000E+00	0.0000E+00
3224	-2925	0.0000E+00	0.0000E+00	3227	-3027	0.0000E+00	0.0000E+00
3228	0.0000E+00	3029	0.0000E+00	3231	-2766	0.0000E+00	0.0000E+00
3232	-1750	735 9	0.0000E+00	3236	-2988	0.0000E+00	0.0000E+00
3237	-2853	0.0000E+00	0.0000E+00	3240	-2096	0.0000E+00	0.0000E+00
3258	0.0000E+00	-2563	0.0000E+00	3259	-1994	0.0000E+00	0.0000E+00
3260	0.0000E+00	-4261	0.0000E+00	3271	0.0000E+00	-2872	0.0000E+00
3272	0.0000E+00	-2701	0.0000E+00	3273	0.0000E+00	-4516	0.0000E+00
3297	0.0000E+00	-2776	0.0000E+00	3299	0.0000E+00	-2673	0.0000E+00
3300	0.0000E+00	-3220	0.0000E+00	3301	0.0000E+00	-2387	0.0000E+00
3318	0.0000E+00	-1878	0.0000E+00	3320	0.0000E+00	-2803	0.0000E+00
3321	0.0000E+00	-1112	0.0000E+00	3322	0.0000E+00	-1448	0.0000E+00
3331	0.0000E+00	-1640	0.0000E+00	3322	0.0000E+00	-1660	0.0000E+00
3354	0.0000E+00	-2413	0.0000E+00	3353	0.0000E+00	-1706	0.0000E+00
3372	0.0000E+00	-1444	0.0000E+00	3355	0.0000E+00	-1661	0.0000E+00
3375	0.0000E+00	-1454	0.0000E+00	3374	0.0000E+00	-1345	0.0000E+00
3405	0.0000E+00	-624 5	0.0000E+00	3376	0.0000E+00	-898 3	0.0000E+00
3408	0.0000E+00	-913 4	0.0000E+00	3407	0.0000E+00	-698 2	0.0000E+00
3426	0.0000E+00	-488 9	0.0000E+00	3409	0.0000E+00	-1952	0.0000E+00
3429	0.0000E+00	-491 4	0.0000E+00	3428	0.0000E+00	-429 2	0.0000E+00
3446	-3061	0.0000E+00	0.0000E+00	3430	0.0000E+00	-662 6	0.0000E+00
3452	-2656	0.0000E+00	0.0000E+00	3451	-3110	0.0000E+00	0.0000E+00
3455	-1305	0.0000E+00	0.0000E+00	3453	0.0000E+00	-3958	0.0000E+00
3464	-1488	0.0000E+00	0.0000E+00	3459	-1603	0.0000E+00	0.0000E+00
3466	0.0000E+00	-1125	0.0000E+00	3465	-1455	0.0000E+00	0.0000E+00
3476	0.0000E+00	1920	0.0000E+00	3468	-425 7	-326 2	0.0000E+00
3479	-1241	0.0000E+00	0.0000E+00	3478	0.0000E+00	2083	0.0000E+00
3484	-1266	0.0000E+00	0.0000E+00	3480	-975 4	1491	0.0000E+00
3488	-2069	0.0000E+00	0.0000E+00	3485	-1994	0.0000E+00	0.0000E+00
3491	0.0000E+00	2521	0.0000E+00	3489	0.0000E+00	3401	0.0000E+00
3493	-1101	1514	0.0000E+00	3492	-1562	0.0000E+00	0.0000E+00
3498	-2075	0.0000E+00	0.0000E+00	3497	-1357	0.0000E+00	0.0000E+00
3512	-1290	0.0000E+00	0.0000E+00	3501	-2259	0.0000E+00	0.0000E+00
3518	-2082	0.0000E+00	0.0000E+00	3517	-1284	0.0000E+00	0.0000E+00
3520	0.0000E+00	-2086	0.0000E+00	3519	0.0000E+00	-1997	0.0000E+00
3525	-1645	0.0000E+00	0.0000E+00	3521	-1036	-1515	0.0000E+00
3531	-2414	0.0000E+00	0.0000E+00	3530	-1663	0.0000E+00	0.0000E+00
3533	0.0000E+00	-2356	0.0000E+00	3532	0.0000E+00	-3292	0.0000E+00
				3534	-1219	-1326	0.0000E+00

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